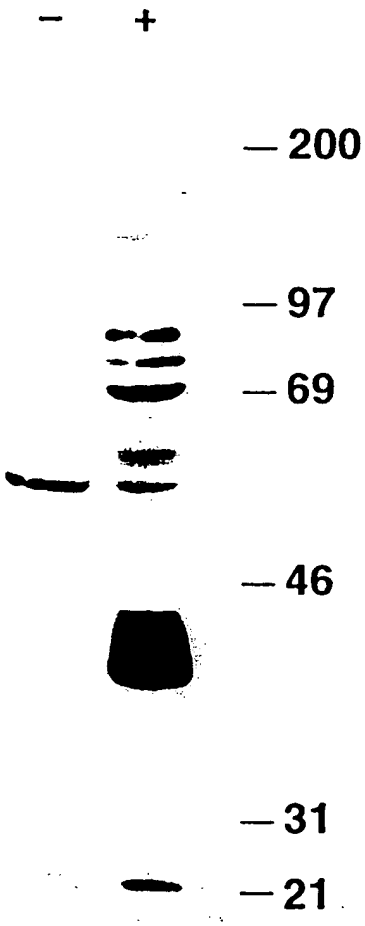


FIG. 1A

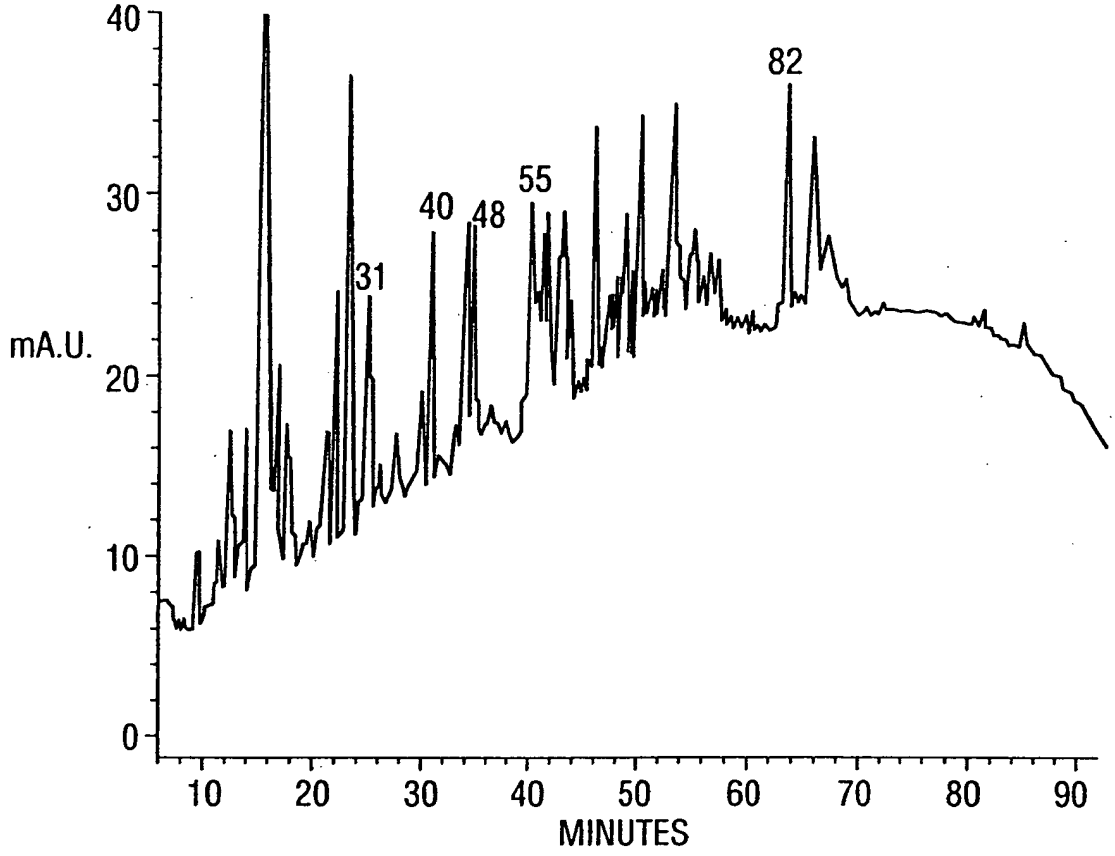


FIG. 1B

Expt	Peak	Mass	Sequence	Source
1	40	1721.9	x x v N V S Q E L H P x A A k	LAT
1	82	1840.0	S E V L G W D P D S L A D Y F K	SLP-76
2	31	n.d.	S I F T R	SLP-76
3	55	1334.8	n.d.	SLP-76
3	48	1743.3	L P G S Y D S T S S D S L Y P R	LAT
3	48	1641.6	x Y v N V	LAT

FIG. 1C

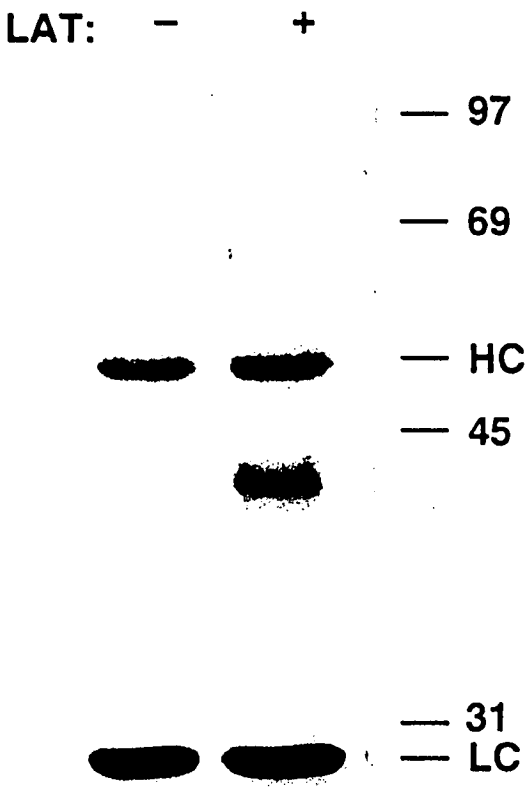


FIG. 2A

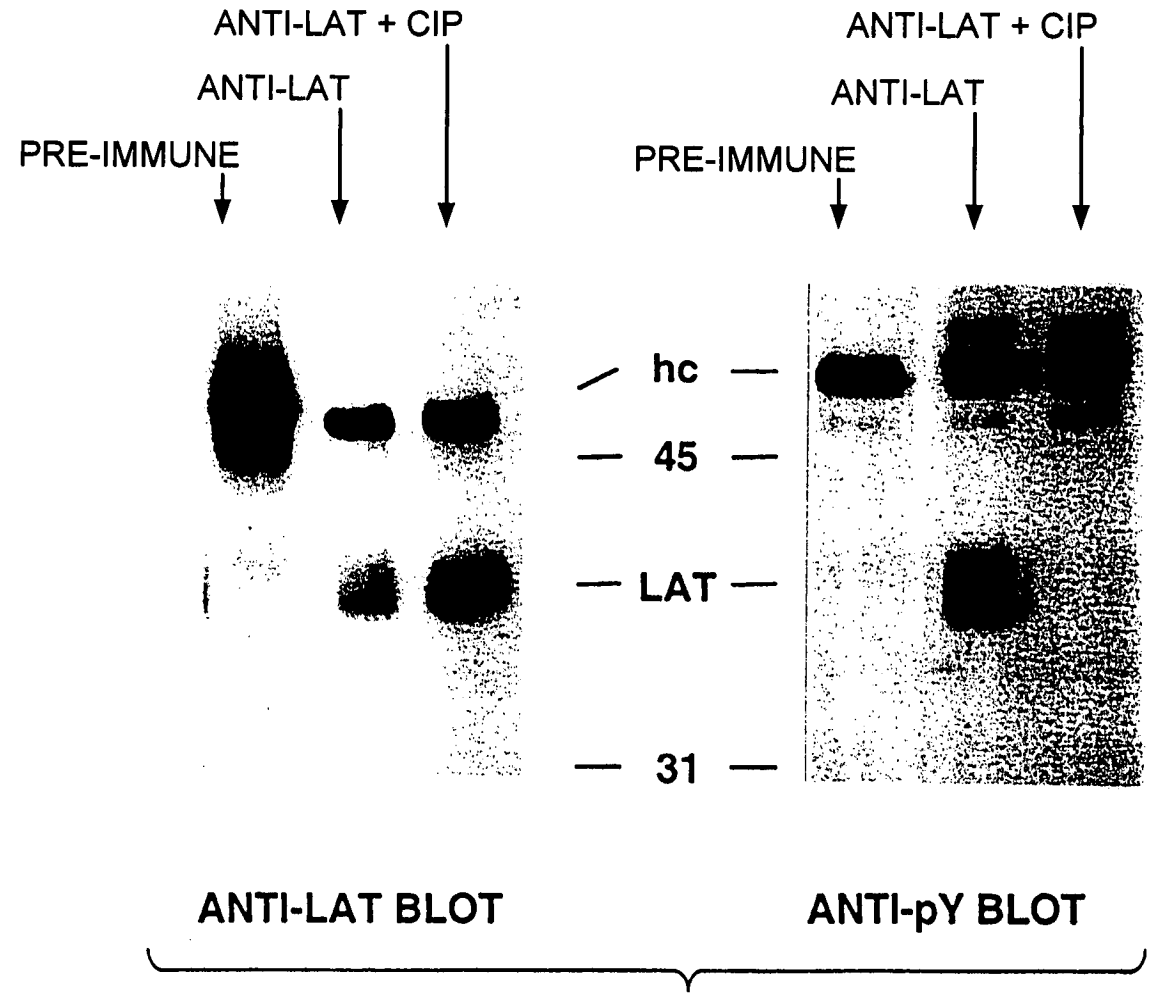


FIG. 2B

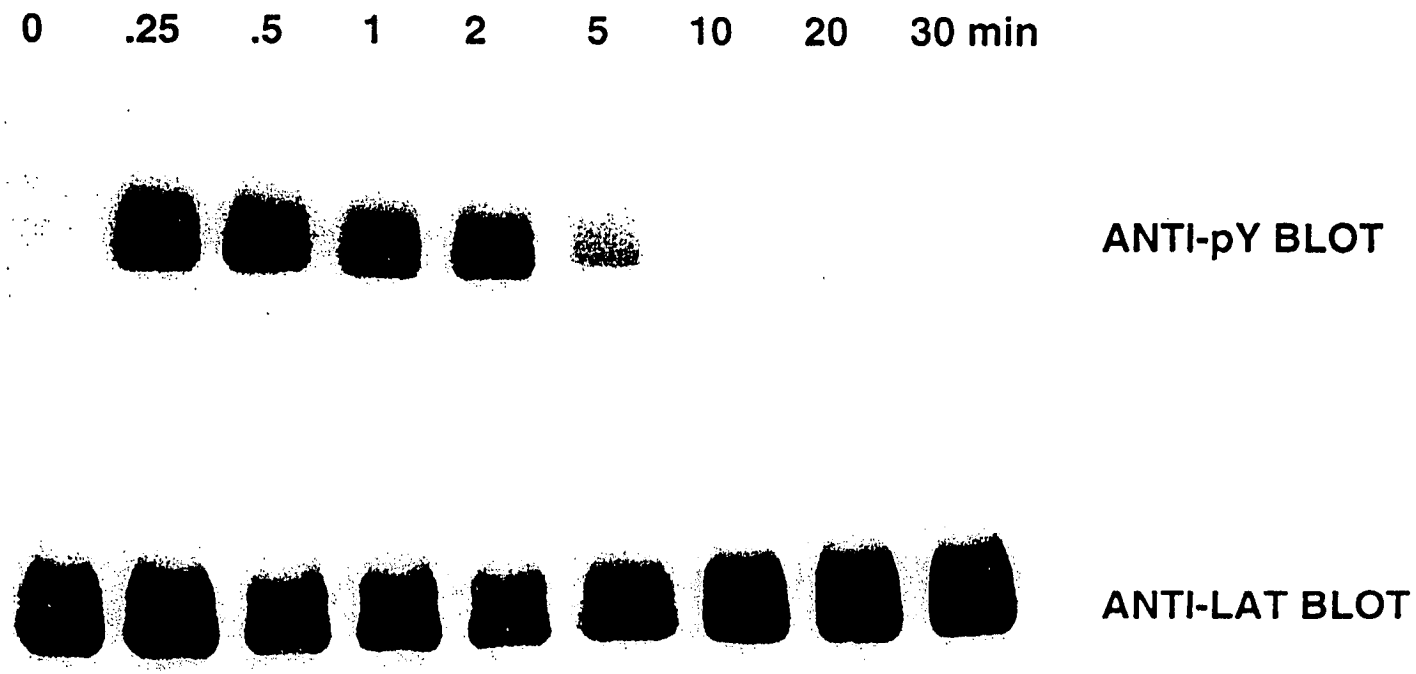


FIG. 2C

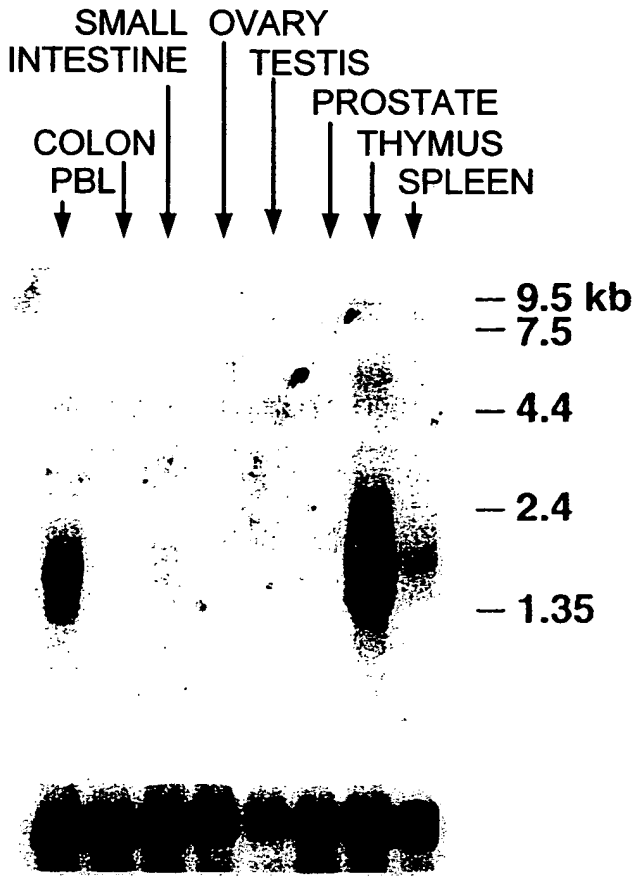


FIG. 3A

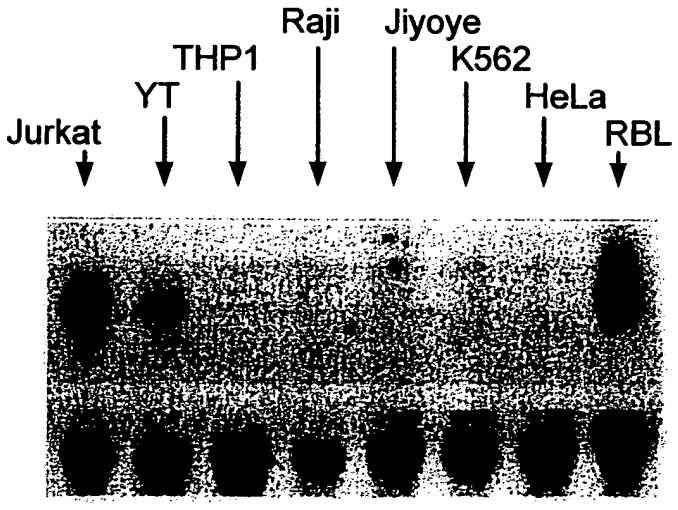


FIG. 3B

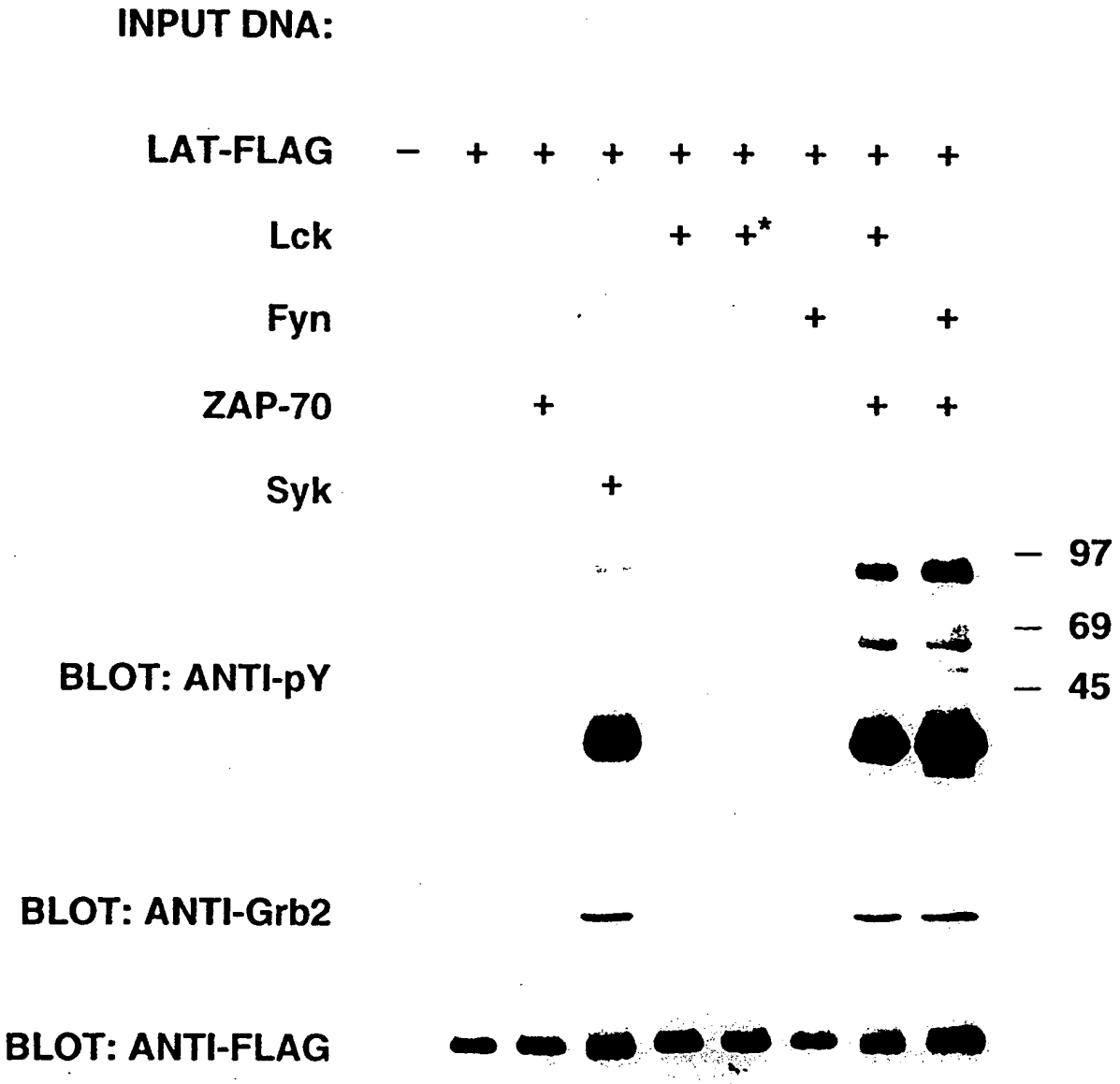


FIG. 4A

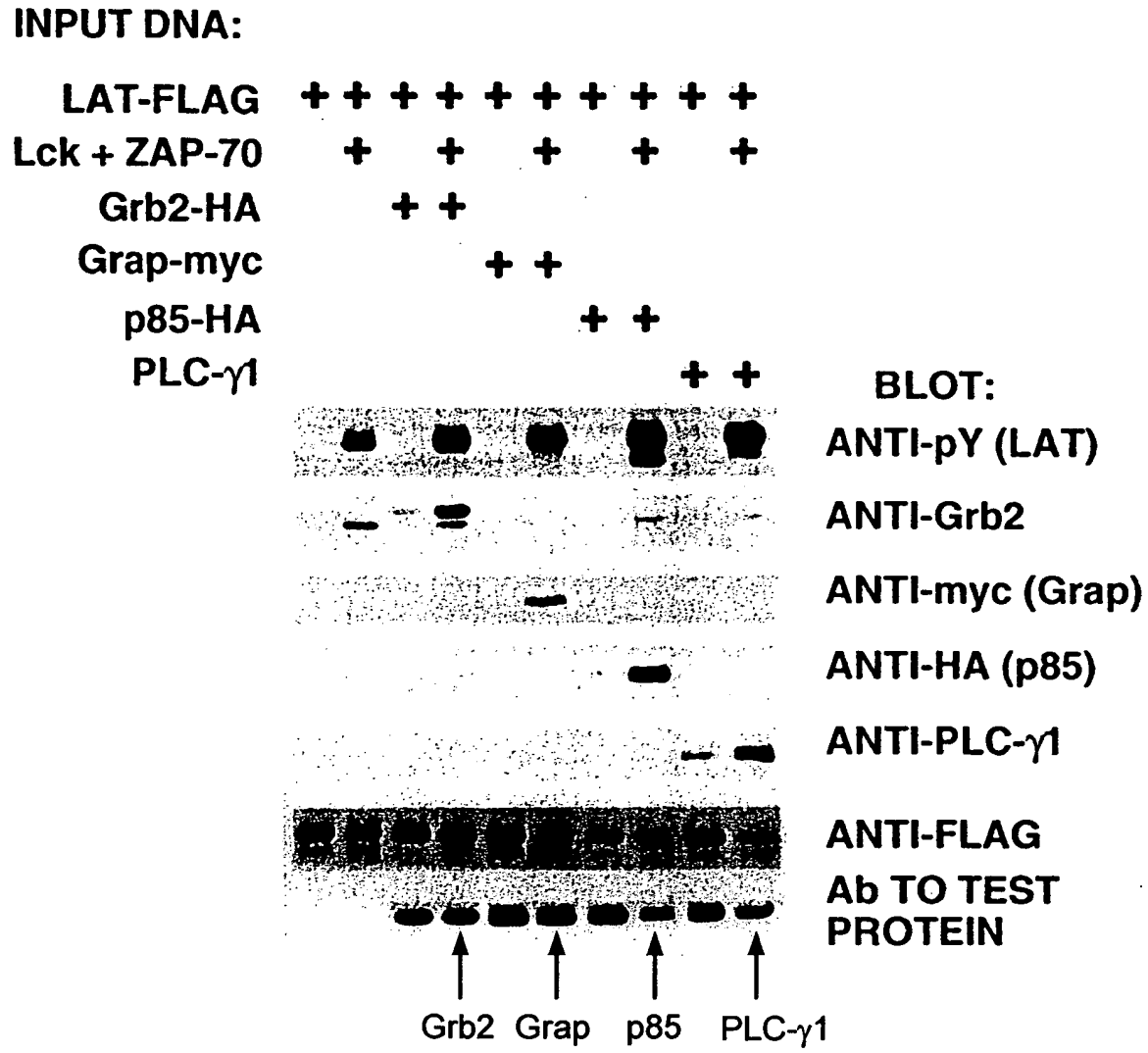


FIG. 4B

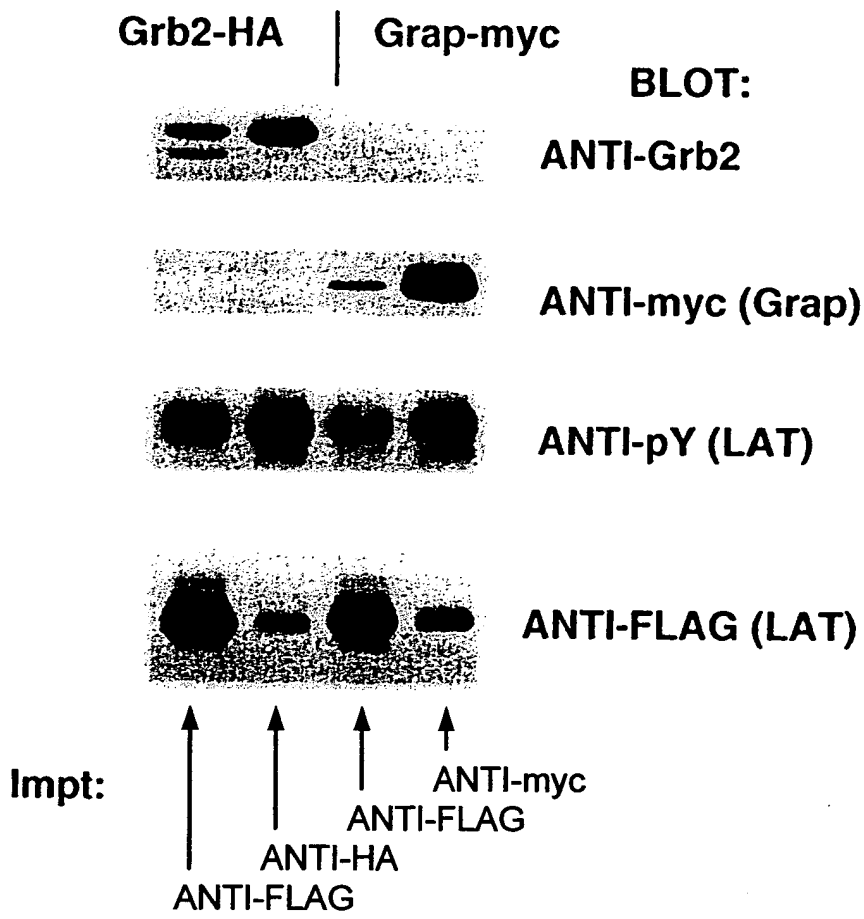


FIG. 4C

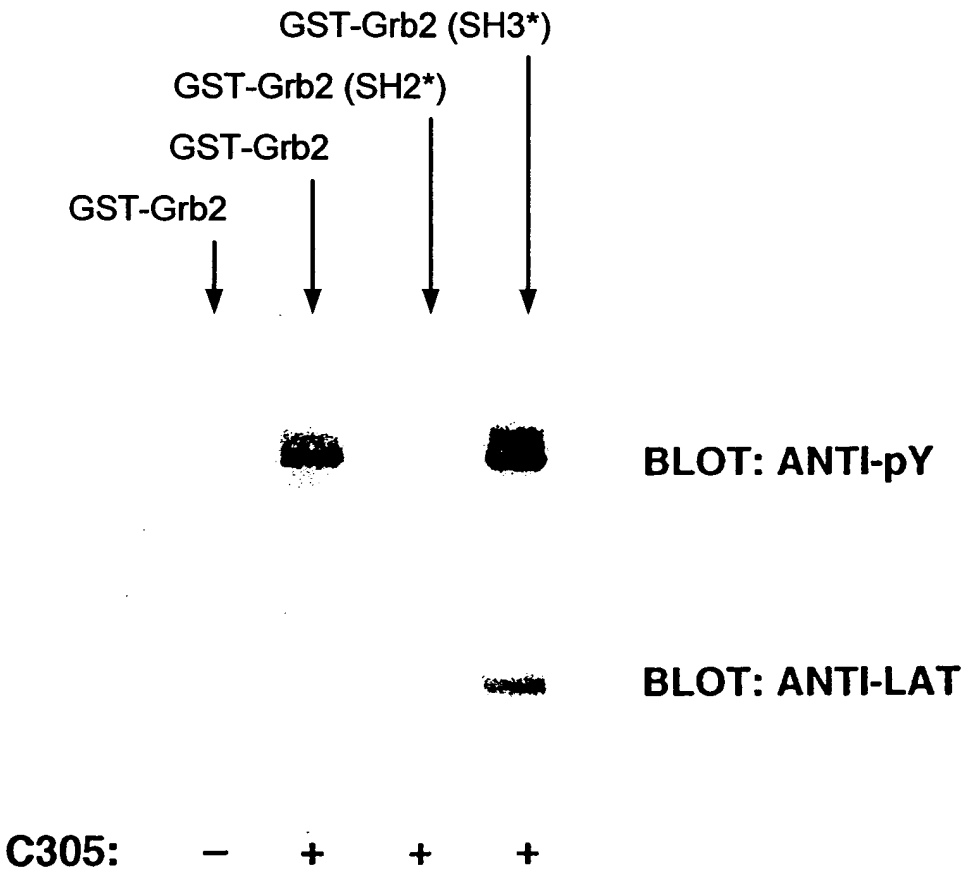


FIG. 5A

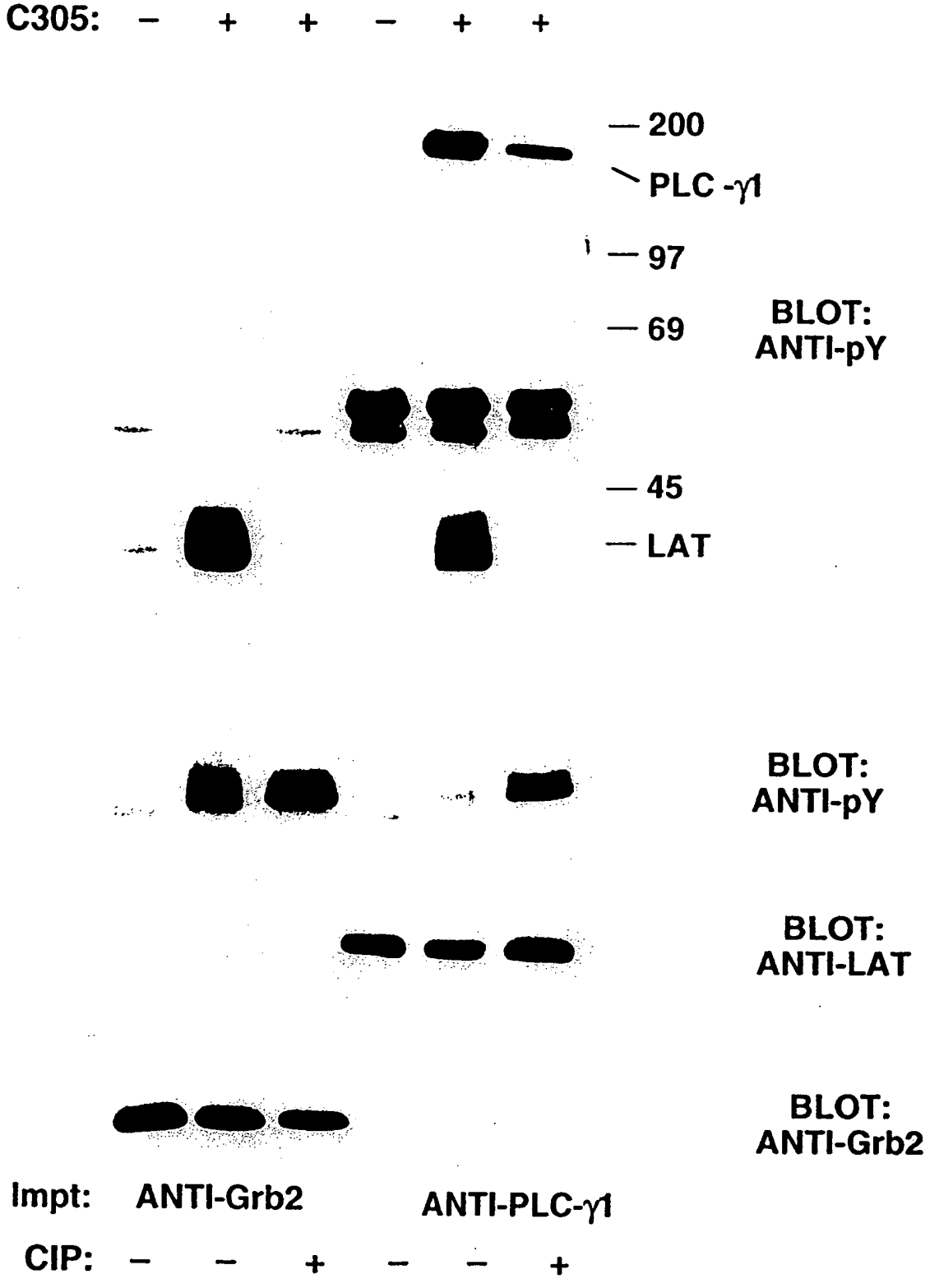
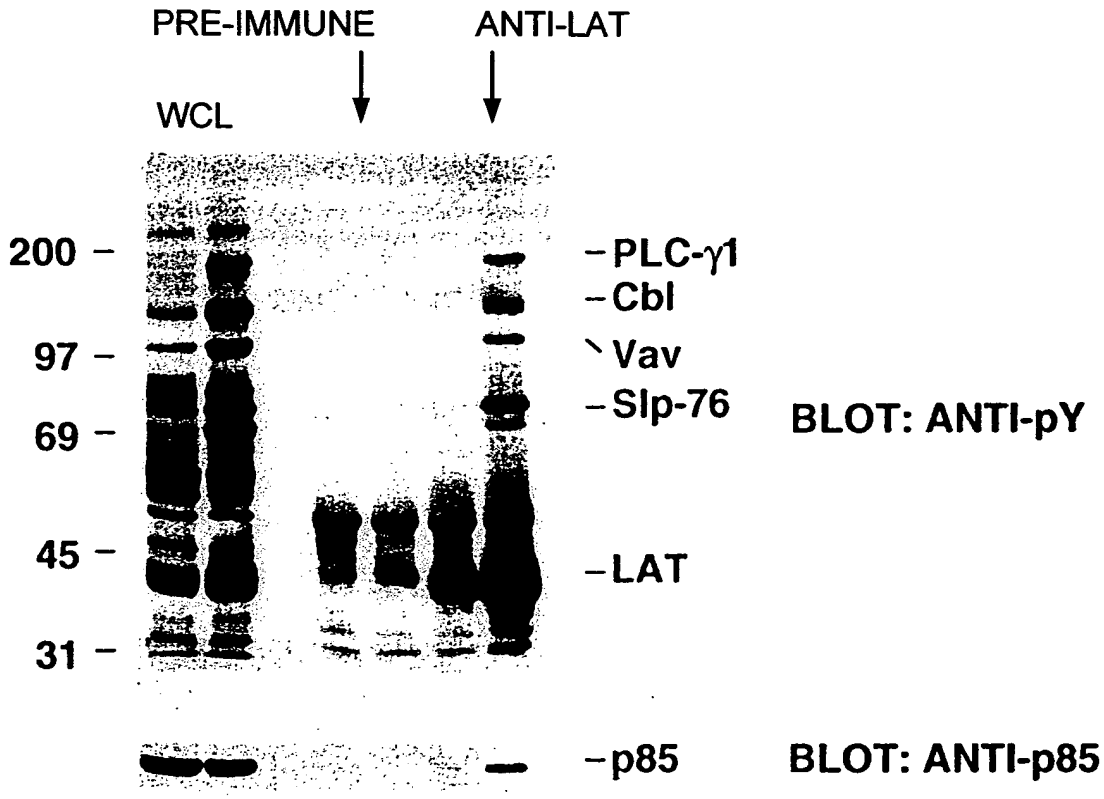


FIG. 5B



C305:

FIG. 5C

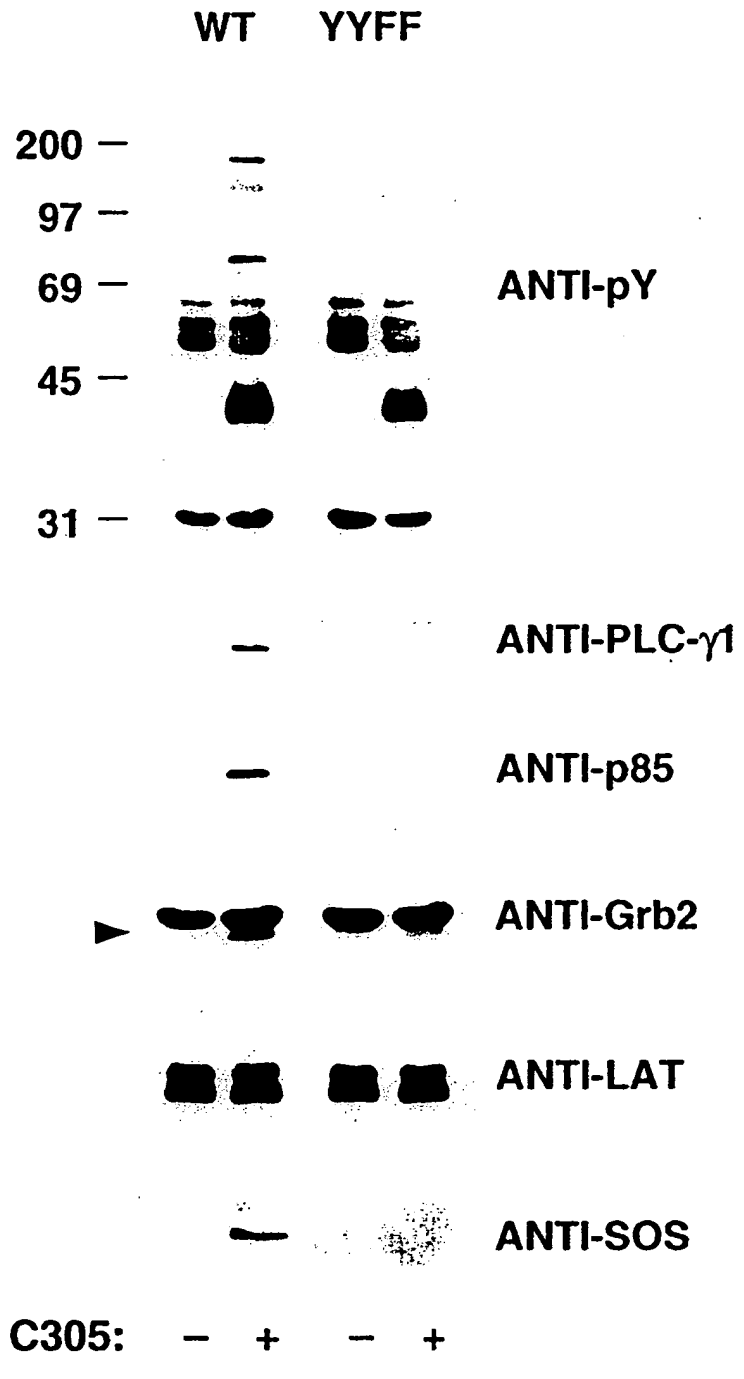


FIG. 6A

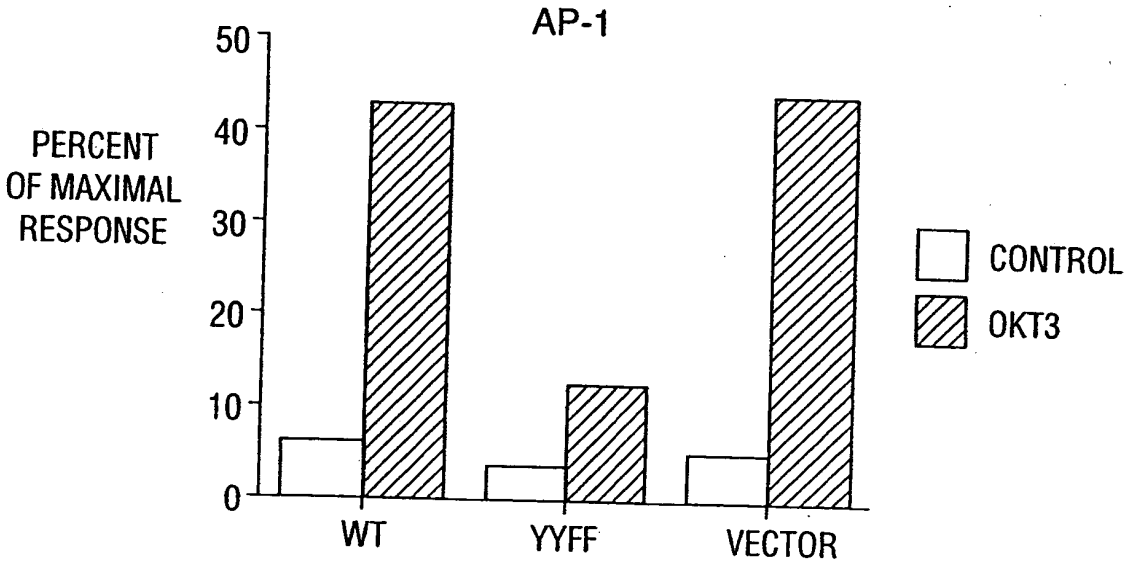


FIG. 6B

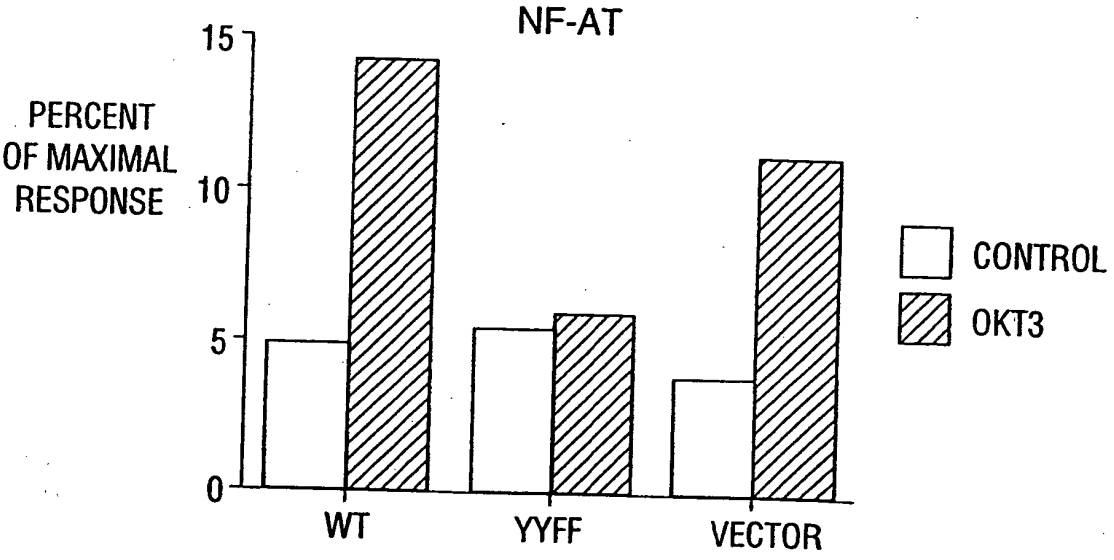


FIG. 6C

Human LAT Nucleotide Sequence (1-1060)

1 gactctgccc ttgaggggcc taggggtgca gccagcctgc tccgagctcc cctgcagatg
61 gaggaggcca tcctggtccc ctgcgtgctg gggctcctgc tgctgcccat cctggccatg
121 ttgatggcac tgtgtgtgca ctgccacaga ctgccaggct cctacgacag cacatcctca
181 gatagtttgt atccaagggg catccagttc aaacggcctc acacggttgc cccctggcca
241 cctgcctacc cacctgtcac ctcctaccca cccctgagcc agccagacct gctccccatc
301 ccaagatccc cgcagccccct tgggggctcc caccggacgc catcttcccg gcgggattct
361 gatggtgcca acagtgtggc gagctacgag aacgaggaac cagcctgtga ggatgcagat
421 gaggatgagg acgactatca caacccaggc tacctggtgg tgcttcctga cagcaccccg
481 gccactagca ctgctgcccc atcagctcct gcactcagca cccctggcat ccgagacagt
541 gccttctcca tggagtccat tgatgattac gtgaacgttc cggagagcgg ggagagcgca
601 gaagcgtctc tggatggcag ccgggagtat gtgaatgtgt cccaggaact gcatcctgga
661 gcggctaaga ctgagcctgc cgccctgagt tcccaggagg cagaggaagt ggaggaagag
721 ggggctccag attacgagaa tctgcaggag ctgaactgag ggcctgtgga ggccgagtct
781 gtcctggaac caggcttgcc tgggacggct gagctgggca gctggaagtg gctctggggt
841 cctcacatgg cgtcctgccc ttgctccagc ctgacaacag cctgagaaat ccccccgtaa
901 cttattatca ctttgggggtt cggcctgtgt cccccgaacg ctctgcacct tctgacgcag
961 cctgagaatg acctgccctg gccccagccc tactctgtgt aatagaataa aggcctgcgt
1021 gtgtctgtgg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa

FIG. 7A

Human LAT Nucleotide Sequence (1-1460), [alternative splice variant]

1 accccatctt catctggcct tgactctgcc cttgaggggc ctaggggtgc agccagcctg
61 ctccgagctc ccctgcagat ggaggaggcc atcctggtcc cctgcgtgct ggggctcctg
121 ctgctgccca tcctggccat gttgatggca ctgtgtgtgc actgccacag actgccaggc
181 tcctacgaca gcacatcctc agatagtttg tatccaaggg gcatccagtt caaacggcct
241 cacacggttg ccccctggcc acctgcctac ccacctgtca cctcctaccc acccctgagc
301 cagccagacc tgctccccat cccaagatcc ccgcagcccc ttgggggctc ccaccggacg
361 ccatcttccc ggcgggattc tgatggtgcc aacagtgtgg cgagctacga gaacgagggt
421 gcgtctggga tccgaggtgc ccaggctggg tggggagtct ggggtccgtc ctggactagg
481 ctgacccctg tgtcgttacc cccagaacca gcctgtgagg atgcagatga ggatgaggac
541 gactatcaca acccaggcta cctggtggtg cttcctgaca gcaccccggc cactagcact
601 gctgccccat cagctcctgc actcagcacc cctggcatcc gagacagtgc cttctccatg
661 gagtccattg atgattacgt gaacgttccg gagagcgggg agagcgcaga agcgtctctg
721 gatggcagcc gggagtatgt gaatgtgtcc caggaactgc atcctggagc ggctaagact
781 gagcctgccg ccctgagttc ccaggaggca gaggaagtgg aggaagaggg ggctccagat
841 tacgagaatc tgcaggagct gaactgaggg cctgtggagg ccgagtctgt cctggaacca
901 ggcttgcctg ggacggctga gctgggcagc tggaagtggc tctggggtcc tcacatggcg
961 tcctgccctt gctccagcct gacaacagcc tgagaaatcc ccccgtaact tattatcact
1021 ttggggttcg gcctgtgtcc cccgaacgct ctgcaccttc tgacgcagcc tgagaatgac
1081 ctgccctggc cccagcccta ctctgtgtaa tagaataaag gcctgcgtgt gtctgtgttg
1141 agcgtgcgtc tgtgtgtgcc tgtgtgcgag tctgagtcag agatttggag atgtctctgt
1201 gtgtttgtgt gtatctgtgg gtctccatcc tccatggggg ctcagccagg tgctgtgaca
1261 ccccccttct gaatgaagcc ttctgacctg ggctggcact gctgggggtg aggacacatt
1321 gccccatgag acagtcccag aacacggcag ctgctggctg tgacaatggt ttcaccatcc
1381 ttagaccaag ggatgggacc tgatgacctg ggaggactct tttagttctt acctcttgtg
1441 gttctcaata aaacagaacg

FIG. 7B

Murine LAT Nucleotide Sequence (1-1260)

1 ggcacgagca ggcggggagc aagaaagggg caggtacagc tgggcacggg gatcgtgcag
61 ctggtagctg gggcacgggc cccagctctg gctctggggc gagcaccttt ccagagccaa
121 cactgctctc aactcagtcc agcaagagag gggagccatc cagccccgaa aggatacggc
181 tgcctactgc cgggcggatc ccaggctgga gcccgcttgg tcccataccc ctgctgccac
241 tctgtctcga ggggctgcag tgcagcaggg cctgtggcag gtgctctgca gatggaagca
301 gacgccttga gcccggtggg gctgggcctc ctgctgctgc ccttcttggt cacgctcctg
361 gctgccctgt gcgtgcgctg ccgtgagttg ccagtctcct atgacagcac ttccacagag
421 agtttgtacc caagaagcat cctcatcaag ccacctcaaa taaccgtccc ccgaacacct
481 gctgtttcct accctctagt cacttccttc ccacccctga ggcagccaga cctgctcccc
541 atcccgagat ccccacagcc ccttgggggt tcccatcgga tgccatcttc ccagcagaat
601 tcagatgatg ccaacagtgt ggcaagctac gagaaccagg agccagcctg taagaatgtg
661 gatgcagatg aggatgaaga cgactatccc aacggctacc tagtggtgct gcctgacagt
721 agtcctgctg ccgtcccctgt tgtctcctct gctcctgtgc ctagcaaccc tgaccttgga
781 gacagtgcct tctctgtgga gtcgtgtgaa gattacgtga atgttcctga gagtgaggag
841 agcgcagagg cgtctctgga tgggagccgg gagtatgtga atgtgtcccc agagcagcag
901 ccagtgacca gggctgagct ggcctctgtg aactcccagg aggtggaaga cgaaggagaa
961 gaggaagggg tggatggaga ggaagctccc gactatgaga atctacagga gcttaactga
1021 aagcctactg cagctgtctg tcctgaaact ggacttgctg gggtgtcgct aagaggatcc
1081 catttgatct ctgccttgcc acagcctgag aatcttcccc taacttattg tcactttggg
1141 gtccagtctg tgtccccaat attctgtacc ttctgataaa gcctgagaat gaatctggtt
1201 ccagccagac catgtcatgg aataaaggcc atgtgacata aaaaaaaaaa aaaaaaaaaa

FIG. 7C

```
human LAT   1  MEEAILVPCVLGLLLLPIL.AMLMALCVHCHRLPGSYDSTSSDSLYPRGI  49
               ||.. | |..|||||||:| .:| ||||:|: ||.||||||.:||||||:|
murine LAT  1  MEADALSPVGLGLLLLPFLVTLLAALCVRCRELPVSYDSTSTESLYPRSI  50

           50  QFKRPHTVAPWPPA..YPPVTSYPPLSQPDLLPIPRSPQPLGGSHRTPSS  97
               :|.|:...|:.||  ||| |||:|||.||||||||||||||||||| |||
           51  LIKPPQITVPRTPAVSYPLVTSFPPLRQPDLLPIPRSPQPLGGSHRMPSS 100

           98  RRDSDGANSVASYENEEPACE..DADEDEDDYHNPGYLVVLPDSTPATST 145
               ..:||:||||||||||:||||.  ||||||||||.| ||||||||.||. .
          101  QQNSDDANSVASYENQEPACKNVDADEDEDDYPN.GYLVVLPDSSPAAVP 149

          146  AAPSAPALSTPGIRDSAFSMESIDDYVNVPESGESAEASLDGSREYVNVS 195
               ...|||. |.|:: |||||:||.:||||||:||||||||||||||||| |
          150  VVSSAPVPSNPDLGDSAFSVESCEDYVNVPESEESAEASLDGSREYVNVS 199

          196  QELHPGAAKTEPAALSSQEAEE......VEEEGAPDYENLQELN       233
               .| :| ..:.| |.:.|||.|:      |::|:||||||||||
          200  PEQQP.VTRAELASVNSQEVEDEGEEEGVDGEEAPDYENLQELN       242
```

FIG. 7D

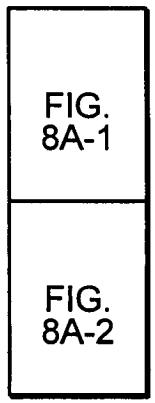


FIG. 8A

1 ggaataggtt agtttcagac aagcctgctt gccggagctc agcagacacc aggccuccg
61 ggcaggcctg gcccaccgtg ggcctcagag ctgctgctgg ggcattcaga accggctctc
121 catt ggcaft gggaccagag accccgcaag tggcctgttt gcctggacat ccacctgtac
181 gtccccaggt ttcgggaggc ccaggggcga tgccagaccc cgcggcgcac ctgcccttct
241 tctacggcag catctcgcgt gccgaggccg aggagcacct gaagctggcg ggcatggcgg
301 acgggctctt cctgctgcgc cagtgcctgc gctcgctggg cggctatgtg ctgtcgctcg
361 tgcacgatgt gcgcttccac cactttccca tcgagcgcca gctcaacggc acctacgcca
421 ttgccggcgg caaagcgcac tgtggaccgg cagagctctg cgagttctac tcgcgcgacc
481 ccgacgggct gccctgcaac ctgcgcaagc cgtgcaaccg gccgtcgggc ctcgagccgc
541 agccgggggt cttcgactgc ctgcgagacg ccatggtgcg tgactacgtg cgccagacgt
601 ggaagctgga gggcgaggcc ctggagcagg ccatcatcag ccaggccccg caggtggaga
661 agctcattgc tacgacggcc cacgagcgga tgccctggta ccacagcagc ctgacgcgtg
721 aggaggccga gcgcaaactt tactctgggg cgcagaccga cggcaagttc ctgctgaggc
781 cgcggaagga gcagggcaca tacgccctgt ccctcatcta tgggaagacg gtgtaccact
841 acctcatcag ccaagacaag gcgggcaagt actgcattcc cgagggcacc aagtttgaca
901 cgctctggca gctggtggag tatctgaagc tgaaggcgga cgggctcatc tactgcctga
961 aggaggcctg ccccaacagc agtgccagca acgcctcagg ggctgctgct cccacactcc
1021 cagcccaccc atccacgttg actcatcctc agagacgaat cgacaccctc aactcagatg
1081 gatacacccc tgagccagca cgcataacgt ccccagacaa accgcggccg atgcccatgg
1141 acacgagcgt gtatgagagc ccctacagcg acccagagga gctcaaggac aagaagctct
1201 tcctgaagcg cgataacctc ctcatagctg acattgaact tggctgcggc aactttg get
1261 cagtgcgcca gggcgtgtac cgcatgcgca agaagcagat cgacgtggcc atcaaggtgc
1321 tgaagcaggg cacggagaag gcagacacgg aagagatgat gcgcgaggcg cagatcatgc
1381 accagctgga caacccctac atcgtgcggc tcattggcgt ctgccaggcc gaggccctca
1441 tgctggtcat ggagatggct gggggcgggc cgctgcacaa gttcctggtc ggcaagaggg
1501 aggagatccc tgtgagcaat gtggccgagc tgctgcacea ggtgtccatg gggatgaagt
1561 acctggagga gaagaacttt gtgcaccgtg acctggcggc ccgcaacgtc ctgctggtta
1621 accggcacta cgccaagatc agcgactttg gcctctccaa agcactgggt gccgacgaca
1681 gctactacac tgcccgctca gcagggaagt ggccgcteaa gtggtacgca cccgaatgca
1741 tcaacttccg caagttctcc agccgcagcg atgtctggag ctatggggtc accatgtggg
1801 aggccttgtc ctacggccag aagccctaca agaagatgaa agggccggag gtcatggcct
1861 tcatcgagca gggcaagcgg atggagtgcc caccagagtg tccacccgaa ctgtacgcac
1921 tcatgagtga ctgctggatc tacaagtggg aggatcgccc cgacttcctg accgtggagc
1981 agcgcatgcg agcctgttac tacagcctgg ccagcaaggt ggaagggccc ccaggcagca
2041 cacagaaggc tgaggctgcc tgtgcctgag ctcccgctgc ccaggggagc cctccacgcc

FIG. 8A-1

2101 ggctcttccc caccctcagc cccaccccag gtcctgcagt ctggctgagc cctgcttggt
2161 tgtctccaca cacagctggg ctgtggtagg gggtgtctca ggccacaccg gccttgcatt
2221 gcctgcctgg ccccctgtcc tctctggctg gggagcaggg aggtccggga gggtgcggct
2281 gtgcagcctg tcctgggctg gtggctcccg gagggccctg agctgagggc attgcttaca
2341 cggatgcctt cccctgggcc ctgacattgg agcctgggca tcctcaggtg gtcaggcgta
2401 gatcaccaga ataaacccag cttccctctt gaaaaaaaaa aaaaaaaaaa aacc

Human ZAP-70 Nucleotide Sequence (1 ~2454)

FIG. 8A-2

1 mpdpaahlpf fygsisraea eehlklagma dglfllrqcl rslggyvlsl vddvrfhhfp
61 ierqlngtya iaggkahcgp aelcqfysqd pdglpcnlrn acnrppglep qpgvfdclrd
121 amvrdyvrqt wklegdaleq aiisqapqve kliattaher mpwyhssltr eeaerklysg
181 qqtdgkfllr prkeqgtyal slvygktvyh ylisqdkagk ycipegtkfd tlwqlveylk
241 lkadgliyrl kevcpnssas aavaaptlpa hpstftqpqr rvdtlnsdgy tpeparlass
301 tdkprpmpmd tsvyespysd peelkdkklf lkrenllvad ielgcgnfgs vrqgvyrmrk
361 kqidvaikvl kqgtekadkd ernmreaqimh qldnpyivrl igvcqaealm lvmemagggp
421 lhkfllgkke ipvsnvaell hqvamgmkyl eeknfvhrdl aamvllvnr hyakisdfgl
481 skalgaddsy ytarsagkwp lkwyapecin frkfssrsdv wsygvtmwea fsygqkpykk
541 mkgpevldfi kqgkrmecpp ecppemyalm sdcwiykwed rpdfltveqr mrnyyyslas
601 raegppqceq vaeaacg

Human ZAP-70 Amino Acid Sequence (1 ~617)

FIG. 8B

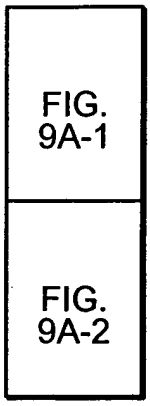


FIG. 9A

1 gaggaagagc cgcgggcccg gcggctgagg ccaccccggc ggcggctgga gagcgaggag
61 gagcgggtgg ccccgcgctg cgcccgccct cgcctcacct ggcgcaggtg gacacctgcg
121 t caggtgtgtg ccctccggcc cctgaagcat ggccagcagc ggcatggctg acagcgccaa
181 ccacctgccc ttctttttcg gcaacatcac ccgggaggag gcagaagatt acctggtcca
241 ggggggcatg agtgatgggc tttatttgct gcgccagagc cgcaactacc tgggtggctt
301 cgccctgtcc gtggcccacg ggaggaaggc acaccactac accatcgagc gggagctgaa
361 tggcacctac gccatcgccg gtggcaggac ccatgccagc cccgccgacc tctgccacta
421 ccactcccag gagtctgatg gcctggtctg cctcctcaag aagcccttca accggcccca
481 aggggtgcag cccaagactg ggccctttga ggatttgaag gaaaacctca tcagggaata
541 tgtgaagcag acatggaacc tgcagggtca ggctctggag caggccatca tcagtcagaa
601 gcctcagctg gagaagctga tcgctaccac agcccatgaa aaaatgcctt ggttccatgg
661 aaaaatctct cgggaagaat ctgagcaaat tgtcctgata ggatcaaaga caaatggaaa
721 gttcctgatc cgagccagag acaacaacgg ctcctacgcc ctgtgcctgc tgcacgaagg
781 gaaggtgctg cactatcgca tcgacaaaga caagacaggg aagctctcca tccccgaggg
841 aaagaagttc gacacgctct ggcagctagt cgagcattat tcttataaag cagatggttt
901 gttaagagtt cttactgtcc catgtcaaaa aatcggcaca cagggaaatg ttaattttgg
961 aggccgtcca caacttccag gttcccatcc tgcgtcctcc cctgcccaag ggaaccggca
1021 agagagtact gtgtcattca atccgtatga gccagaactt gcaccctggg ctgcagacaa
1081 aggcccccag agagaagccc tacccatgga cacagaggtg tacgagagcc cctacgcgga
1141 aggaggttta ccccgaggag atcaggccca cctggaccga aagctgctga cgctggaaga
1201 ggctctggta caaagaactg attttggaac tgtgaaaaag ggctactacc aaatgaaaaa
1261 tgaaaatact gaaaaacgag agttgtgaaa accgtggctg gccaatgacc ccgctcttaa
1321 agatgagtta ttagcagaag caaatgtcat gcagcagctg gacaacccgt acatcgtgcg
1381 gatgatcggg atatgcgagg ccgagtcctg gatgctggtt atggagatgg cagaacttgg
1441 aagtatttgc agcagaacag acatgtcaag tcccctcaat gataagaaca tcatagaaet
1501 agcaattttg ggttcatcag gtttccatgg gcatgaagta cuggaggag tgcacagaga
1561 tctggctgca agaaatgtgt tgctagttac ccaacattac gccaagatca gtgatttcgg
1621 actttccaaa gcactgcgtg ctgatgaaaa ctactacaag gcccagaccc atggaaagtg
1681 gcctgtcaag tggtacgctc cggaatgcat caactactac aagttctcca gcaaaagcga

FIG. 9A-1

1741 tgtctggagc tttggagtgt tgatgtggga agcattctcc tatgggcaga agccatatcg
1801 agggatgaaa ggaagtgaag tcaccgctat gttagagaaa ggagagcgga tggggtgccc
1861 tgcagggtgt ccaagagaga tgtacgatct catgaatctg tgctggacat acgatgtgga
1921 aaacaggccc ggattcgcag cagtggaact gcggctgcgc aattactact atgacgtggt
1981 gaactaaccg ctcccgcacc tgtcggtggc tgcctttgat cacaggagca atcacaggaa
2041 aatgtatcca gaggaattga ttgtcagcca cctccctctg ccagtcggga gagccaggct
2101 tggatggaac atgcccacaa cttgtcaccc aaagcctgtc ccaggactca ccctccacaa
2161 agcaaaggca gtcccgggag aaaagacgga tggcaggatc caaggggcta gctggatttg
2221 tttgttttct tgtctgtgtg attttcatac aggttatttt tacgatctgt ttccaaatcc
2281 ctttcatgtc tttccacttc tctgggtccc ggggtgcatt tgttactcat cgggcccagg
2341 gacattgcag agtggcctag agcactctca ccccaagcgg cctttlccaa atgcccaagg
2401 atgccttagc atgtgactcc tgaagggaag gcaaaggcag aggaatttgg ctgcttctac
2461 ggccatgaga ctgatccctg gccactgaaa agctttcctg acaataaaaa tgttttgagg
2521 ctttaaaaag aaaaaaaaaa a

Human Syk Kinase Nucleotide Sequence (1~2541)

FIG. 9A-2

1 massgmadsa nhlpfffgni treeaedylv qggmsdglyl lrqsrnylgg falsvahgrk
61 ahhytierel ngtyaiaggr thaspadlch yhsqesdglv cllkkpfnrp qgvqpktgpf
121 edlkenlire yvkqtwnlqg qaleqaiisq kpqlekliat tahekmpwfh gkisreeseq
181 ivligsktng kflirardnn gsyalcllhe gkvlhyridk dktgklsipe gkkfdtlwql
241 vehysykadg llrvltvpcq kigtqgnvnf ggrpqlpgsh passpaqgnr qestvsfnpy
301 epelapwaad kgpqrealpm dtevyespya dpeeirpkev yldrklltle dkelgsgnfg
361 tvkkgyyqmk kvvktvavki lkneandpal kdellaeanv mqqldnpyiv rmigiceaes
421 wmlvmemael gplnkylqqn rhvkdkniie lvhqvsmgmk yleesnfvhr dlaarnvllv
481 tqhyakisdf glskalrade nyykaqthgk wpvkwyapec inyykfssks dvwsfgvlmw
541 eafsygqkpy rgmkgsevta mlekgermgc pagcpremyd lmnlcwtydv enrpgfaave
601 lrlmyyydv vn

Human Syk Kinase Amino Acid Sequence (1-612)

FIG. 9B

```
   1 gccagtgaat tcgggggctc agccctcctc cctcccttcc ccctgcttca ggctgctgag
  61 cactgagcag cgctcagaat ggaagccatc gccaaatatg acttcaaagc tactgcagac
 121 gacgagctga gcttcaaaag gggggacatc ctcaaggttt tgaacgaaga atgtgatcag
 181 aactggtaca aggcagagct taatggaaaa gacggcttca ttcccaagaa ctacatagaa
 241 atgaaaccac atccgtggtt ttttggcaaa atccccagag ccaaggcaga agaaatgctt
 301 agcaaacagc ggcacgatgg ggcctttctt atccgagaga gtgagagcgc tcctggggac
 361 ttctccctct ctgtcaagtt tggaaacgat gtgcagcact tcaaggtgct ccgagatgga
 421 gccgggaagt acttcctctg ggtggtgaag ttcaattctt tgaatgagct ggtggattat
 481 cacagatcta catctgtctc cagaaaccag cagatattcc tgcgggacat agaacaggtg
 541 ccacagcagc cgacatacgt ccaggccctc tttgactttg atccccagga ggatggagag
 601 ctgggcttcc gccggggaga ttttatccat gtcatggata actcagaccc caactggtgg
 661 aaaggagctt gccacgggca gaccggcatg tttccccgca attatgtcac ccccgtgaac
 721 cggaacgtct aagagtcaag aagcaattat ttaaagaaag tgaaaaatgt aaaacacata
 781 caaaagaatt aaacccacaa gctgcctctg acagcagcct gtgagggagt gcagaacacc
 841 tggccgggtc accctgtgac cctctcactt tggttggaac tttaggggggt gggaggggggc
 901 gttggattta aaaatgccaa aacttaccta taaattaaga agagttttta ttacaaattt
 961 tcactgctgc tcctctttcc cctcctttgt ctttttttc atcctttttt ctcttctgtc
1021 catcagtgca tgacgtttaa ggccacgtat agtcctagct gacgccaata ataaaaaaca
1081 agaaaccaaa aaaaaaaaac ccgaattca
```

Human Grb Nucleotide Sequence (1-1109)

FIG. 10A

```
  1 meaiakydfk ataddelsfk rgdilkvlne ecdqnwykae lngkdgfipk nyiemkphpw
 61 ffgkipraka eemlskqrhd gaflireses apgdfslsvk fgndvqhfkv lrdgagkyfl
121 wvvkfnslne lvdyhrstsv srnqqiflrd ieqvpqqpty vqalfdfdpq edgelgfrrg
181 dfihvmdnsd pnwwkgachg qtgmfprnyv tpvnrnv
```

Human Grb Amino Acid Sequence (1-217)

FIG. 10B

1 ctaggctttt gcaaaaagct tcacgctgcc gcaagcactc agggcgcaag ggctgctaaa
61 ggaagcggaa cacgtagaaa gccagtccgc agaaacggtg ctgaccccgg atgaatgtca
121 gctactgggc tatctggaca agggaaaacg caagcgcaaa gagaaagcag ttcctgtgcc
181 ttaagaacat tagaaccttc ctgtccacct gctgtgagaa gttcggcctc aagcggagcg
241 agctcttcga agcctttgac ctcttcgatg tgcaggattt tggcaaggtc atctacaccc
301 tgtctgctct gtcctggacc ccgatcgccc agaacagggg gatcatgccc ttccccaccg
361 aggaggagag tgtaggtgat gaagacatct acagtggcct gtccgaccag atcgacgaca
421 cggtggagga ggatgaggac ctgtatgact gcgtggagaa tgaggaggcg gaaggcgacg
481 agatctatga ggacctcatg cgctcggagc ccgtgtccat gccgcccaag atgacagagt
541 atgacaagcg ctgctgctgc ctgcgggaga tccagcagac ggaggagaag tacactgaca
601 cgctgggctc catccagcag catttcttga agcccctgca acggttcctg aaacctcaag
661 acattgagat catctttatc aacattgagg acctgcttcg tgttcatact cacttcctaa
721 aggagatgaa ggaagccctg ggcacccctg gcgcaccgaa tctctaccag gtcttcatca
781 aatacaagga gaggttcctc gtctatggcc gctactgcag ccaggtggag tcagccagca
841 aacacctgga ccgtgtggcc gcagcccggg aggacgtgca gatgaagctg gaggaatgtt
901 ctcagagagc caacaacggg aggttcactg cgcgacctgc tgatggtgcc tatgcagcga
961 gnctcaaat atcacctcct tctccaggag ctggtgaaac acacgcagga ggcgatggag
1021 caaggaaact gcggctggcc ctggatgcea tgagggacct ggctcagtgc gtgaacgagg
1081 tcaagcgaga caacgagaca ctgcgacaga tcaccaattt ccagctgtcc attgagaacc
1141 tggaccagtc tctggctcac tatggccggc ccaagatcga cggggaactc aagatcacct
1201 cggtggaacg gcgctccaag atggacaggt atgccttcct gctcgacaaa gctctactca
1261 tctgtaagcg caggggagac tcctatgacc tcaaggactt tgtaaacctg cacagcttcc
1321 aggttcggga tgactcttca ggagaccgag acaacaagaa gtggagccac atgttcctcc
1381 tgatcgagga ccaaggtgcc cagggctatg agctgttctt caagacaaga gaattgaaga
1441 agaagtggat ggagcagttt gagatggcca tctccaacat ctatccggag aatgccaccg
1501 ccaacgggca tgacttccag atgttctcct ttgaggagac cacatcctgc aaggcctgtc
1561 agatgctgct tagaggtacc ttctatcagg gctaccgctg ccatcggtgc cgggcatctg
1621 cacacaagga gtgtctgggg agggtccctc catgtggccg acatgggcaa gatttcccag
1681 gaactatgaa gaaggacaaa ctacatcgca gggctcagga caaaaagagg aatgagctgg
1741 gtctgcccaa gatggaggtg tttcaggaat actacgggct tcctccaccc cctggagcca
1801 ttggaccctt tctacggctc aaccctggag acattgtgga gctcacgaag gctgaggctg
1861 aacagaactg gtgggagggc agaaatacat ctactaatga aattggctgg tttccttgta
1921 acagggtgaa gccctatgtc catggccctc ctcaggacct gtctgttcat ctctggtacg
1981 caggccccat ggagcgggca ggggcagaga gcatcctggc caaccgctcg gacgggactt
2041 tcttggtgcg gcagagggtg aaggatgcag cagaatttgc catcagcatt aaatataacg
2101 tcgaggtcaa gcacacggtt aaaatcatga cagcagaagg actgtaccgg atcacagaga
2161 aaaaggcttt ccgggggctt acggagctgg tggagtttta ccagcagaac tctctaaagg
2221 attgcttcaa gtctctggac accaccttgc agttcccctt caaggagcct gaaaagagaa
2281 ccatcagcag gccagcagtg ggaagcacaa agtattttgg cacagccaaa gcccgctatg
2341 acttctgcgc ccgtgaccgt tcagagctgt cgctcaagga gggtgacatc atcaagatcc
2401 ttaacaagaa gggacagcaa ggctggtggc gaggggagat ctatggccgg gttggctggt
2461 tccctgccaa ctacgtggag gaagattatt ctgaatactg ctgagccctg gtgccttggc
2521 agagagacga gaaactccag gctctgagcc cggcgtggcg aggcagcgga ccaggggctg
2581 tgacagctcc ggcgggtgga gactttggga tggactggag gaggccagcg tccagctggc
2641 ggtgctcccg ggatgtgccc tgacatggtt aatttataac accccgattt tcctcttggg
2701 tcccctcaag cagacggggg ctcaaggggg ttacatttaa taaaaggatg aagatgg

Human Vav Nucleotide Sequence (L-2757) FIG. 11A

1 mnvsywaiwl renasakrkq flclknirif lstccekfgl krselfeafd lfdvqdfgkv
61 iytlsalswt piaqnrgimp fpteeesvgd ediysglsdq iddtveeded lydcveneea
121 egdeiyedlm rsepvsmppk mteydkrccc lreiqqteek ytdtlgsiqq hflkplqrfl
181 kpqdieiifi niedllrvht hflkemkeal gtpgapnlyq vfikykerfl vygrycsqve
241 saskhldrva aaredvqmkl eecsqranng rftarpadga yaassqispp spgagethag
301 gdgarklrla ldamrdlaqc vnevkrdnet lrqitnfqls ienldqslah ygrpkidgel
361 kitsverrsk mdryaflldk allickrrgd sydlkdfvnl hsfqvrddss gdrdnkkwsh
421 mflhiedqga qgyelffktr elkkkwmeqf emaisniype natanghdfq mfsfeettsc
481 kacqmllrgt fyqgyrchrc rasahkeclg rvppcgrhgq dfpgtmkkdk lhrraqdkkr
541 nelglpkrnev fqeyyglppp pgaigpflrl npgdiveltk aeaeqnwweg rntstneigw
601 fpcnrvkpyv hgppqdlsvh lwyagprnera gaesilanrs dgtflvrqrv kdaaefaisi
661 kynvevkhtv kimtaeglyr itekkafrgl telvefyqqn slkdcfksld ttlqfpfkep
721 ekrtisrpav gstkyfgtak arydfcardr selslkegdi ikilnkkgqq gwwrgeiygr
781 vgwfpanyve edyseyc

Human Vav Amino Acid Sequence (1~797)

FIG. 11B

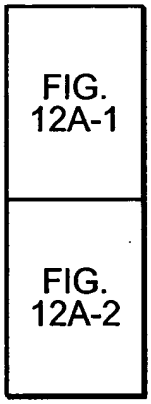


FIG. 12A

1 gaattccggg cccggatagc cggcggcggc ggcggcggcg gcggcggcgg cggccgggag
61 aggcccctcc ucacgccct gcttctctcc ctcgctcgca gtcgagccga gccggcggac
121 ccgcctgggc tccgaccctg cccaggccat ggccggcaac gtgaagaaga gctctggggc
181 cgggggcggc acgggctccg ggggctcggg ttcgggtggc ctgattgggc tcatgaagga
241 cgccttccag ccgcaccacc accaccacca ccacctcagc ccccacccgc cggggacggt
301 ggacaagaag atggtggaga agtgctggaa gctcatggac aaggtggtgc ggttgtgtca
361 gaacccaaag ctggcgctaa agaatagccc accttatatc ttagacctgc taccagatac
421 ctaccagcat ctccgtacta tcttgtcaag atatgagggg aagatggaga cacttggaga
481 aaatgagtat tuagggtgt ttatggagaa tttgatgaag aaaactaagcaaaccataag
541 cctcttcaag gagggaaaag aaagaatgta tgaggagaat tctcagccta ggcgaaacct
601 aaccaaactg tccctcatct tcagccacat gctggcagaa ctaaaaggaa tctttccaag
661 tggactcttt cagggagaca catttcggat tactaaagca gatgctgcgg aattttggag
721 aaaagctttt ggggaaaaga caatagtccc ttggaagagc mcgacagg ctctacatga
781 agtgcatccc atcagttctg ggctggaggc catggctctg aaatccacta ttgatctgac
841 ctgcaatgat tatamcgg ttttgaatt tgacatcttt acccgactct ttcagccctg
901 gtcctctttg ctcaggaatt ggaacagcct tgctgtaact catcctggct acatggcttt
961 tttgacgtat gacgaagtga aagctcggct ccagaaattc attcacaaac ctggcagtta

FIG. 12A-1

1021 tatcnccgg ctgagctgta ctcgtctggg tcagtgggct attgggtatg ttactgctga
1081 tgggaacatt ctccagacaa tccctcacaa taaacctctc ttccaagcac tgattgatgg
1141 cttcagggaa ggctlctatt tgtttcctga tggacgaaat cagaatcctg atctgactgg
1201 cttatgtgaa ccaactcccc aagaccatat caaagtgacc caggaacaat atgaattata
1261 ctgtgagatg ggctccacat tccaactatg taaaatatgt gctgaaaatg ataaggatgt
1321 aaagattgag ccctgtggac acctcatgtg cacatcctgt cttacatcct ggcaggaatc
1381 agaaggtcag ggctgtcctt tctgccgatg tgaaattaaa ggtactgaac ccatcgtggt
1441 agatccgttt gatcctagag ggagtggcag cctgttgagg caaggagcag agggagctcc
1501 ctccccaaat tatgatgatg atgatgatga acgagctgat gatactctct tcatgatgaa
1561 ggaattggct ggtgccaagg tggaacggcc gccttctcca ttctccatgg ccccacaagc
1621 ttcccttccc ccggtgccac cacgacttga ccttctgccg cagcgagtat gtgttccctc
1681 aagtgcttct gctcttggaa ctgcttctaa ggctgcttct ggctcccttc ataaagacaa
1741 accattgcca gtacctccca cacttcgaga tcttccacca ccaccgcctc cagaccggcc
1801 atattctgtt ggagcagaat cccgacctca aagacgcccc ttgccttgta caccaggcga
1861 ctgtccctcc agagacaaac tgccccctgt cccctctagc cgccttggag actcatggct
1921 gccccggcca atccccaaag taccagtatc tgccccaagt tccagtgatc cctggacagg
1981 aagagaatta accaaccggc actcacttcc attttcattg ccctcacaaa tggagcccag
2041 accagatgtg cctaggctcg gaagcacgtt cagtctggat acctccatga gtatgaatag
2101 cagcccatta gtaggtccag agtgtgacca ccccaaaatc aaaccttcct catctgccaa
2161 tgccatttat tctctggctg ccagacctct tcctgtgcca aaactgccac ctggggagca
2221 atgtgagggt gaagaggaca cagagtacat gactccctct tccaggcctc tacggccttt
2281 ggatacatcc cagagttcac gagcatgtga ttgcgaccag cagattgata gctgtacgta
2341 tgaagcaatg tataatattc agtcccaggc gccatctatc accgagagca gcacctttgg
2401 tgaagggaat ttggccgcag cccatgccaa cactggtccc gaggagtcag aaaatgagga
2461 tgatgggtat gatgtcccaa agccacctgt gccggccgtg ctggcccgcc gaactctctc
2521 agatatctct aatgccagct cctcctttgg ctggttgtct ctggatggtg atcctacaac
2581 aaatgtcact gaaggttccc aagttcccga gaggcctcca aaaccattcc cgcggagaat
2641 caactctgaa cggaaagctg gcagctgtca gcaaggtagt ggtcctgccg cctctgctgc
2701 caccgcctca cctcagctct ccagtgagat cgagaacctc atgagtcagg ggtactccta
2761 ccaggacatc cagaaagctt tggtcattgc ccagaacaac atcgagatgg ccaaaaacat
2821 cctccgggaa tttgtttcca tttcttctcc tgcccatgta gctacctagc acaccatctc
2881 cctgctgcag gtttagagga ccagtgagtt gggagttatt actcaagtgg cacctagaag
2941 ggcaggagtt ccrttggtga cttcacagtg aagtcttgcc ctctctgtgg gatatcacat
3001 cagtggttcc aagatttcaa agtggtgaaa tgaaaatgga gcagctagta tgttttatta
3061 ttttatgggt cttgagtgca tttgaaggtg

Human cbl Nucleotide Sequence (1~3090)

FIG. 12A-2

```
   1 rnagnvkkssg aggggsggsg aggliglmkd afqphhhhhh lsphppctvd kkmvekcwkl
  61 rndkvvrlcqn pnvalknspp yildllpdty qhlrtvlsry egkrnetlgen eyfrvfmenl
 121 mkktkqtisl fkegkermye ensqprrnlt klslifshml aelkgifpsg lfqgdtfrit
 181 kadaaefwrk afgektivpw ksfrqalhev hpissgleam alkstidltc ndyisvfefd
 241 iftrlfqpws sllrnwnsla vthpgymafl tydevkarlq kfihkpgsyi frlsctrlgq
 301 waigyvtadg nilqtiphnk plfqalidgf regfylfpdg rnqnpdltgl ceptpqdhik
 361 vtqicaendk dvkiepcghl mctscltswq esegqgcpfc rceikgtepi vvdpfdprgs
 421 gsllrqgaeg apspnydddd deraddslfm mkelagakve rpsspfsmap qaslppvppr
 481 ldllqqrapv pastsvlgta skaasgslhk dkplpipptl rdlppppppd rpysvgaetr
 541 pqrrplpctp gdcpsrdklp pvpssrpgds wlsrtipkvp vatpnpgdpw ngreltnrhs
 601 lpfslpsqme pradvprlgs tfsldtsmtm nsspvagpes ehpkikpsss anaiyslaar
 661 plpmpklppg eqgeseedte ymtptsrpvg vqkpepkrpl eatqssracd cdqqidscty
 721 earnytiqsqa lsvaensasg egnlatahts tgpeesened dgydvpkppv pavlarrtls
 781 disnasssfg wlsldgdpth fnegsqvper ppkpfprrin serkassyqq gggatanpva
 841 tapspqlsse ierlmsqgys yqdiqkalvi ahnniemakn ilrefvsiss pahvat
```

FIG. 12B

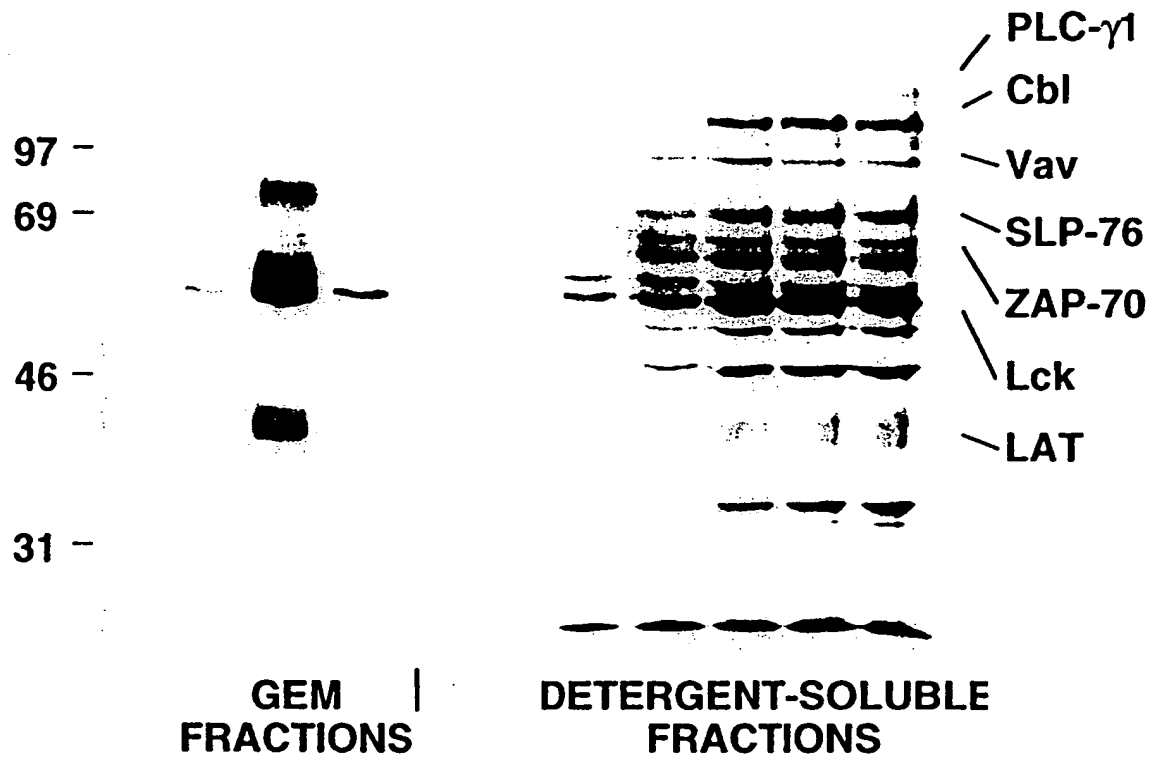


FIG. 13A

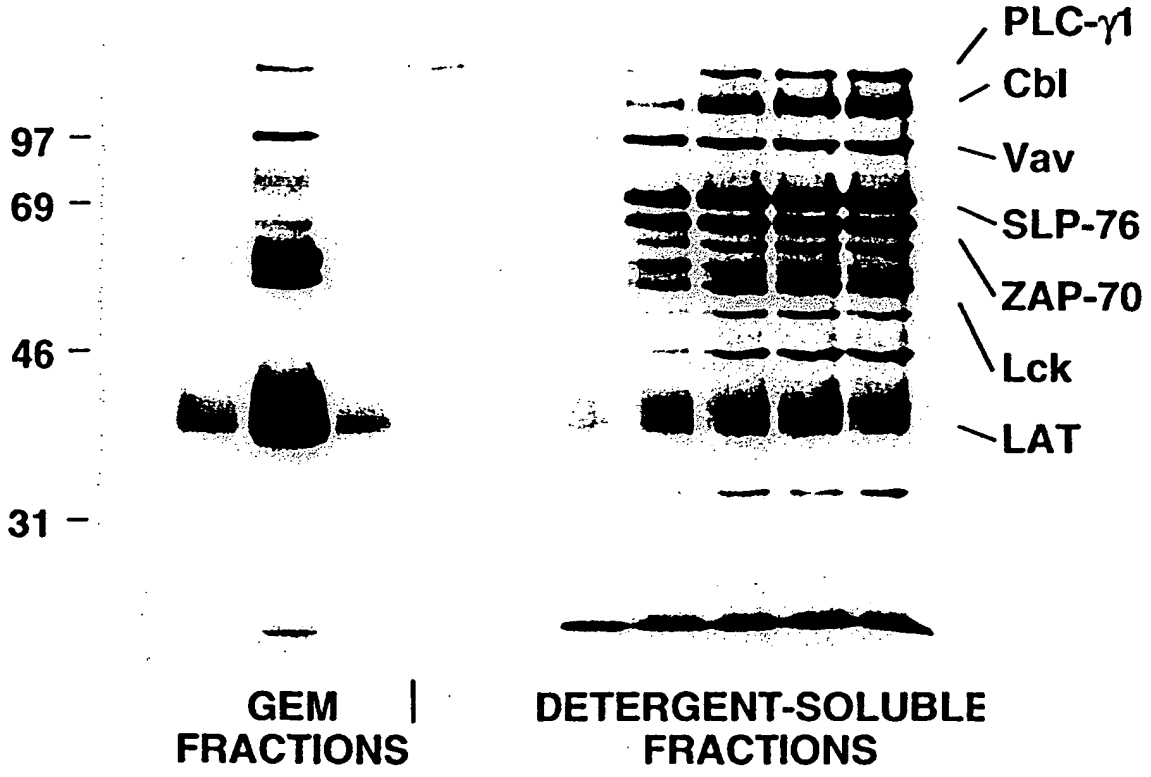


FIG. 13B

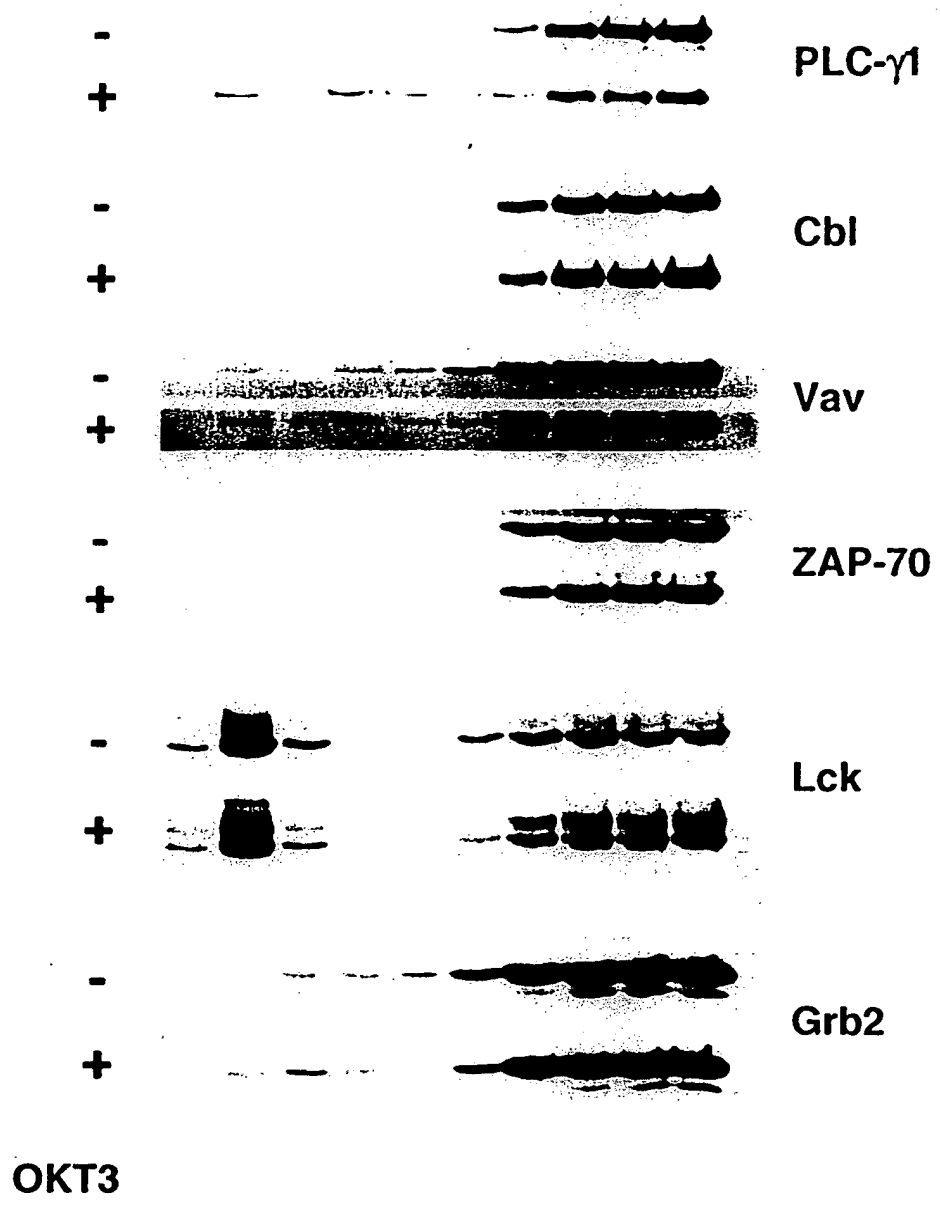


FIG. 13C

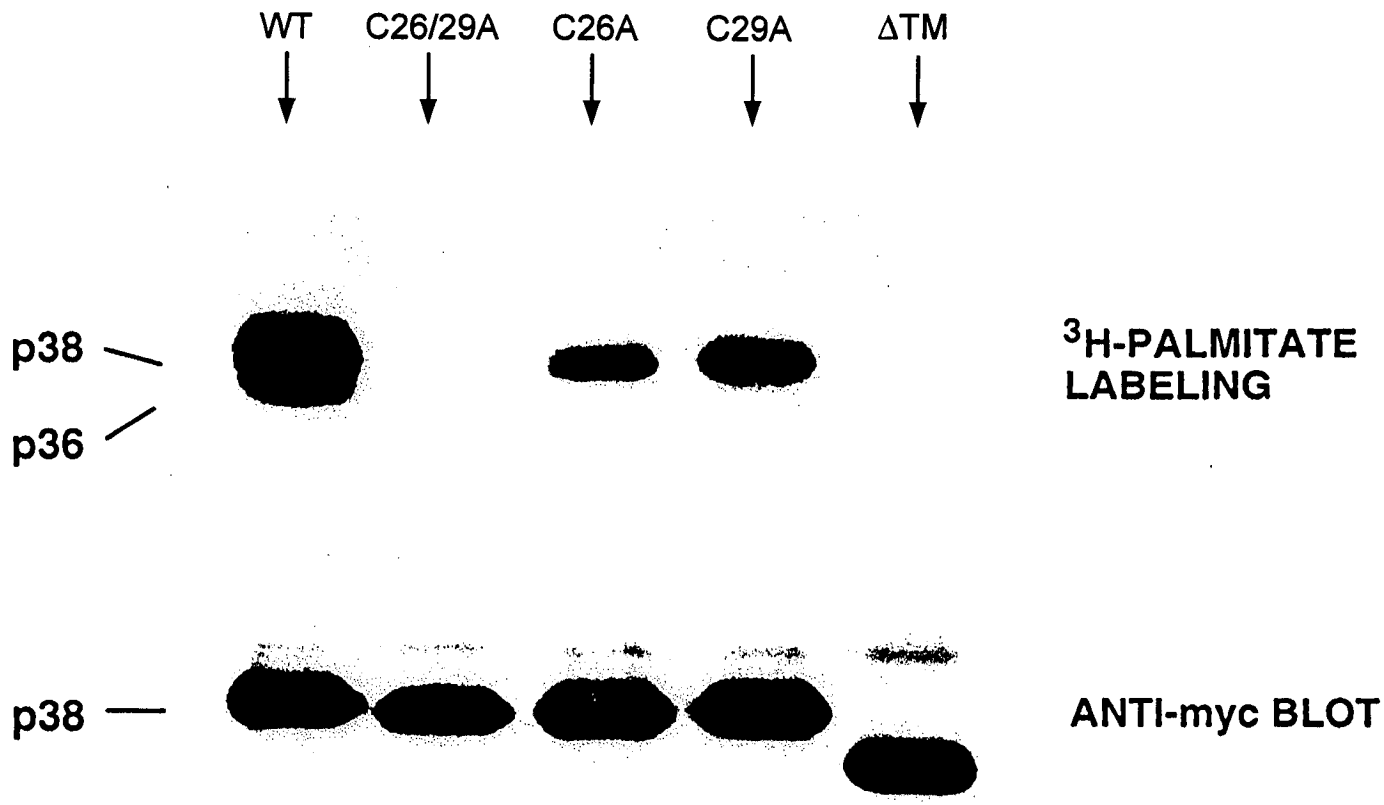


FIG. 14

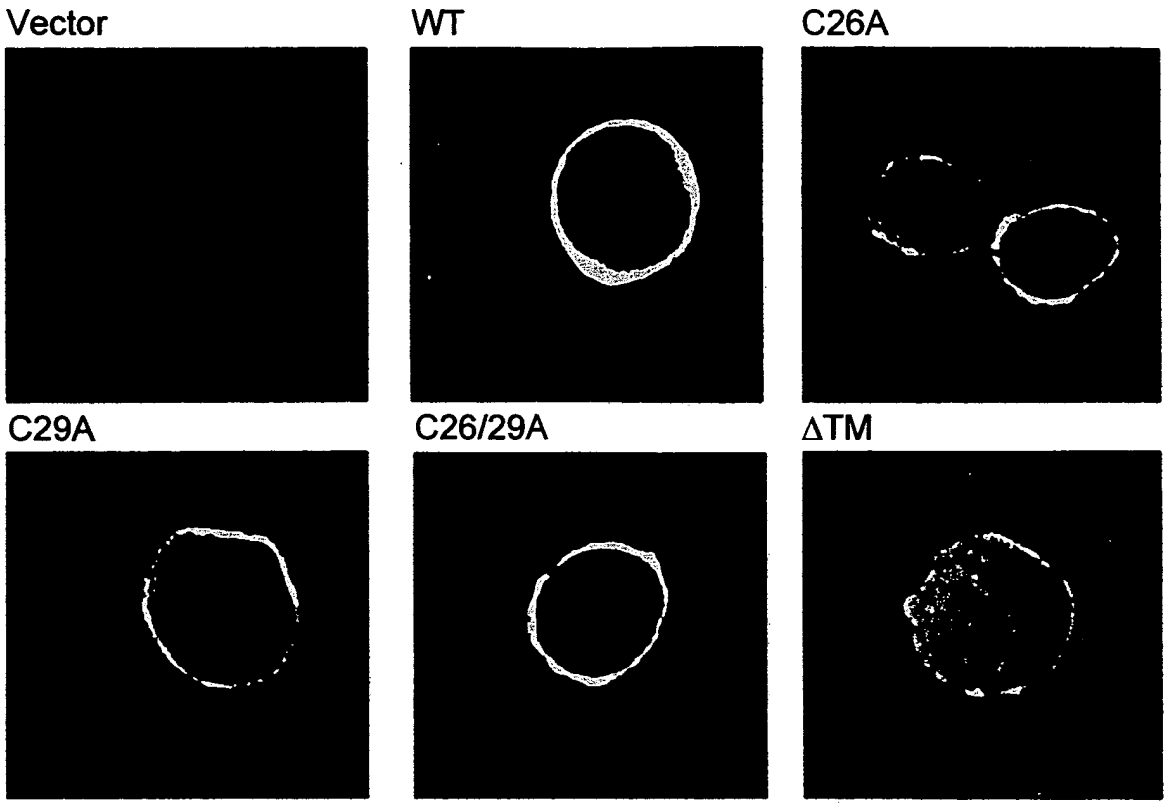


FIG. 15A

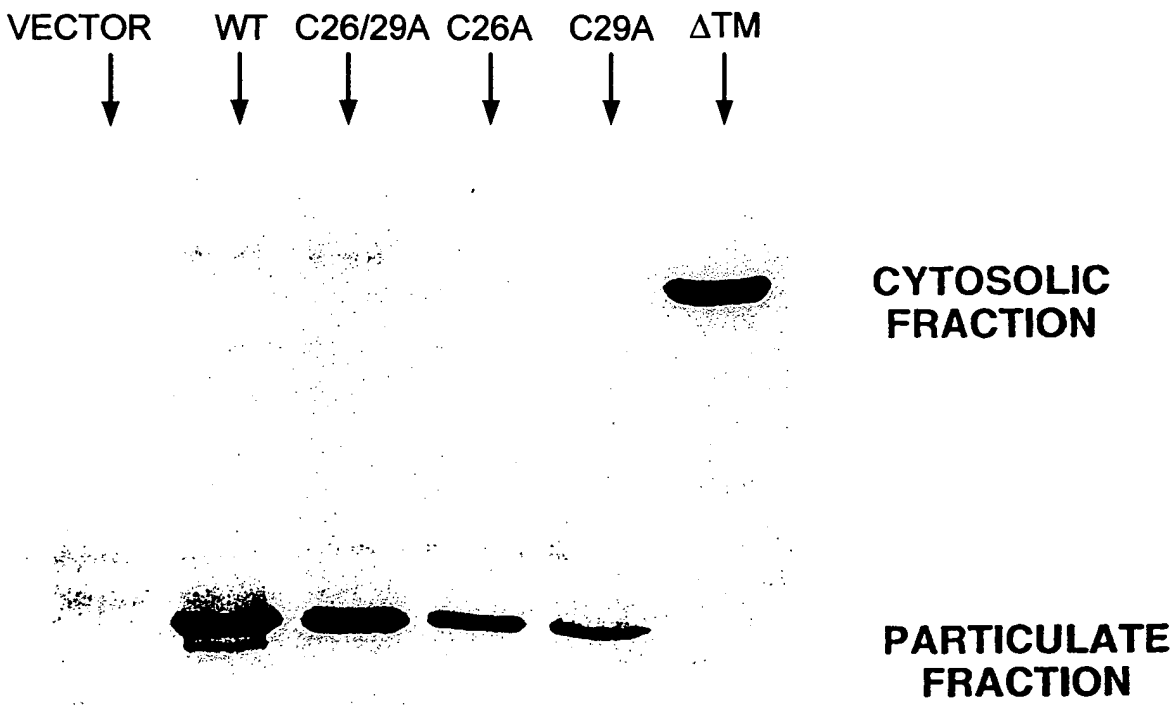


FIG. 15B

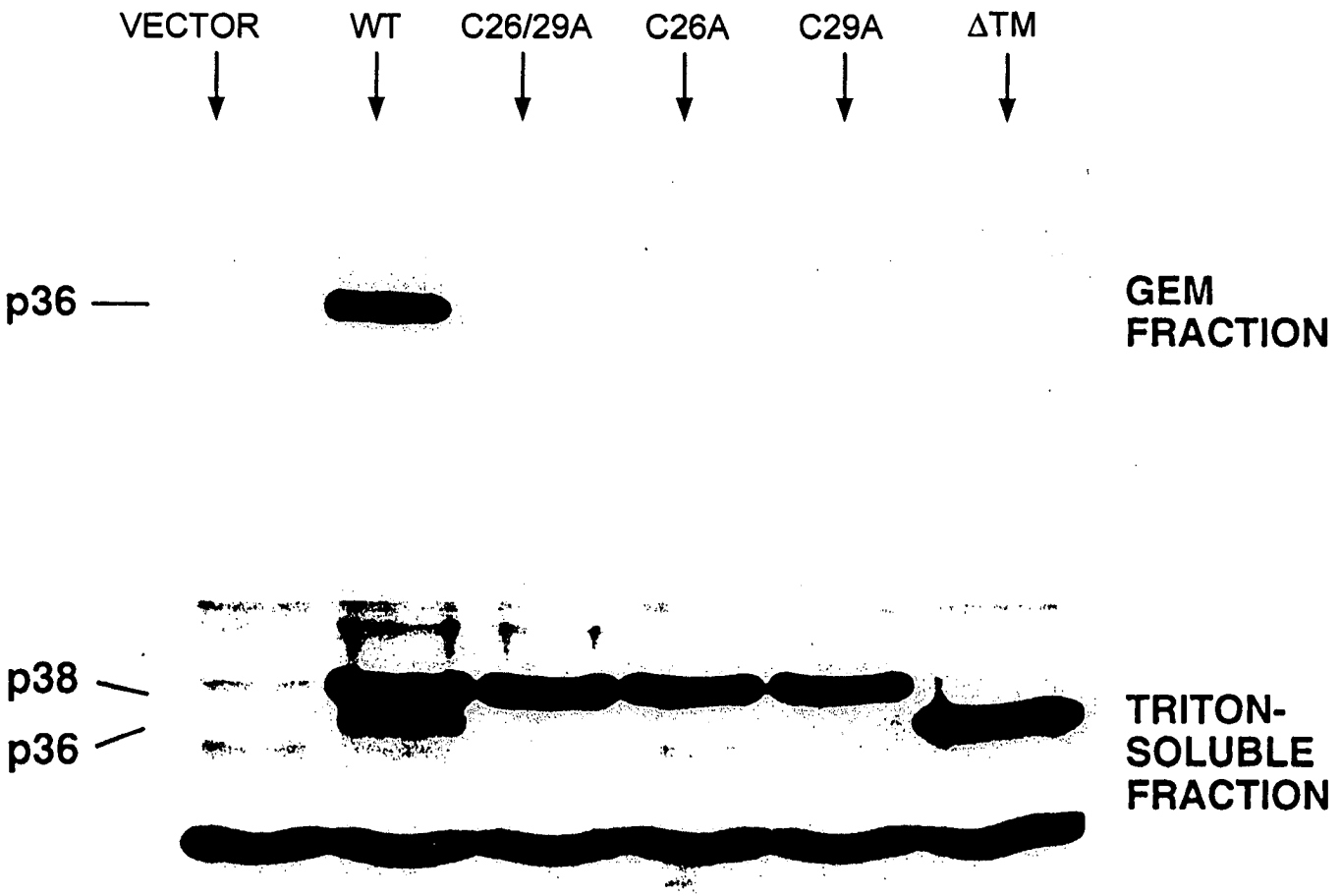


FIG. 15C

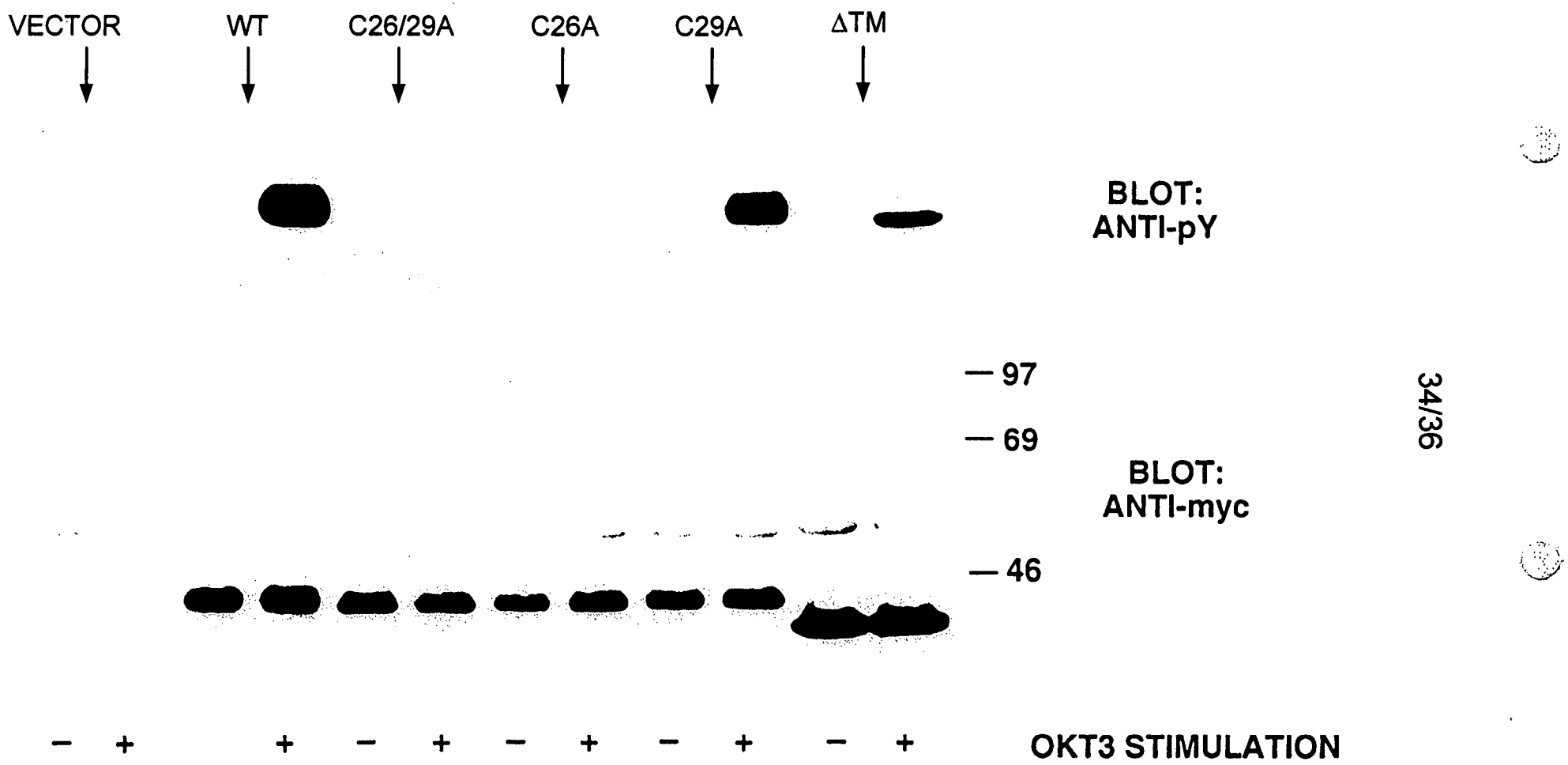


FIG. 16

LAT is a central molecule that links the TCR to cellular activation

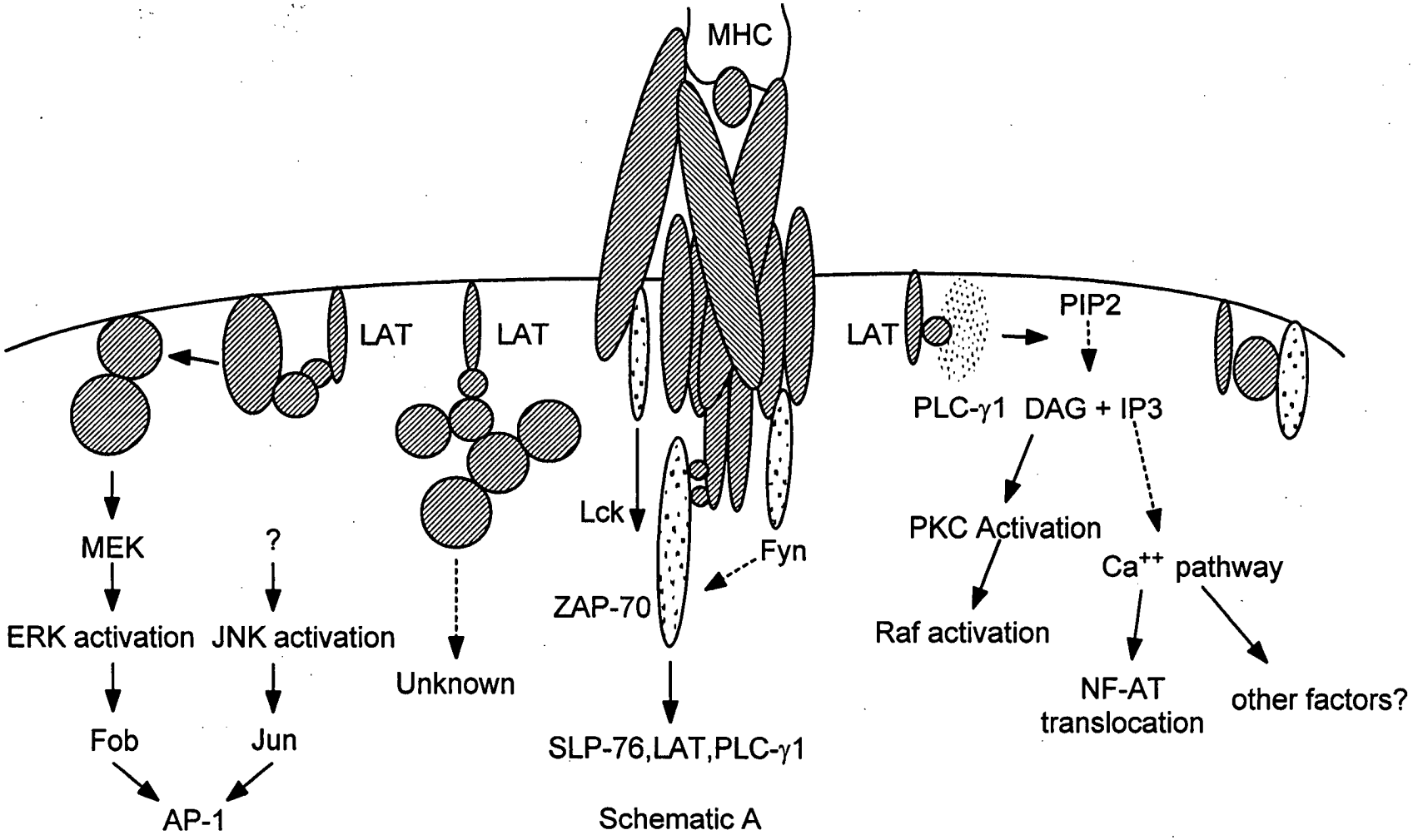


FIG. 17

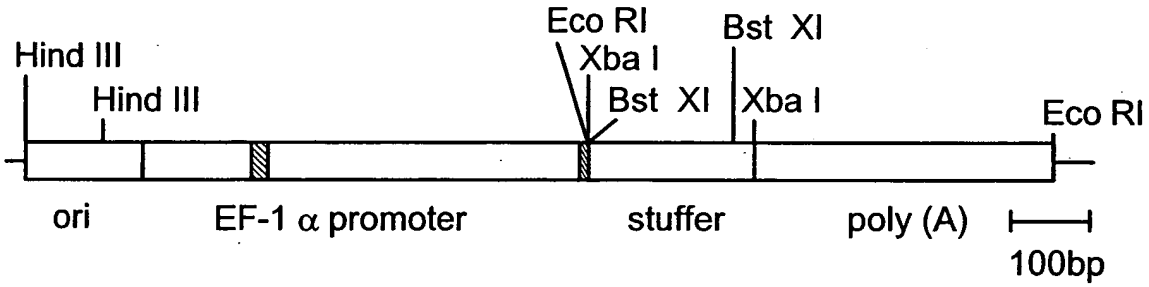


FIG. 18